BURMA GAZETTEER

INSEIN DISTRICT

VOLUME A

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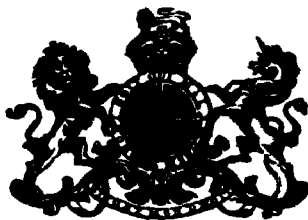
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INSEIN DISTRICT

CHAPTER I

Physical Description.

Constitution of the District.

The Insein district came into existence under the authority of General Department Notification No. 63 of the 17th February 1912, and consists of the northern part of the old Hanthawaddy district which formed the central portion of the former Rangoon district, one of the four divisions of Pegu laid down in 1852, when first the Honourable East India Company assumed charge of the administration of the Province. It is not clear whether the Toungoo district, west of the Sittang, was ever included in Rangoon district; this however would appear to be the case from the notification cited by Laurie in his book on Burma, and correspondence between the Assistant Commissioner, Toungoo, and the Deputy Commissioner, Rangoon, strengthens the probability. The date of partition is unknown but it must have taken place very early Excluding Toungoo, the area of the Rangoon district covered approximately 10,300 square miles, and it was soon found necessary to divide off outlying portions. In 1864 the Bawni circle was allotted to Toungoo, in 1872 the Kawliah circle to Shwegyin, and in 1873 the Thonze circle to Henzada. Piecemeal operations however proved ineffective, and in 1875 the district of Thongwa was formed including three of the townships of Rangoon district; the western boundary thus formed is still to-day the western boundary of Syriam district. In the same year the Town of Rangoon was constituted a separate administrative unit and the surrounding district received the name of Hanthawaddy In 1883, Pegu district was cut out of Hanthawaddy district but Yetho circle was afterwards given back to the latter and *kwins* Nos. 15, 16, 17 and 18 of Sitpin circle were transferred to the former. In the same year Kyauktan subdivision was assigned to Pegu but retransfer-

red in 1895 In the same year Rangoon town was slightly enlarged at the expense of Hanthawaddy district and finally in 1912 by the notification mentioned above the townships of Taikkyi, Tantabin and Insein (which formed the old Insein subdivision) were taken from Hanthawaddy and made into Insein district by the addition of the Hlegu township of the Pegu district.

Boundaries. The southern boundary of the original Rangoon district(1) was the Gulf of Martaban, on the east were Sittang and Leya circles of Shwegyin district; on the north the Kun stream separated it from Toungoo; west of the Pegu Mountain Range it bordered Henzada with which it marched as far as the Irrawaddy River which separated it from Bassein.

At the present day the eastern boundary (2) of the Insein district follows the Pegu River from the boundary of the Rangoon district to a point east of and close to Dabein village and then pursues a northerly course along the valley of the Lagunbyin stream and along the watershed between the Pegu and the Pazundaung Rivers and along the Pegu Mountain Range till it meets the border of the Tharrawaddy district

Thence the northern boundary dividing the district from Tharrawaddy district goes south-west first through Reserved Forests and then through cultivated land crossing the Rangoon-Prome Section of the Burma Railways between the station of Okkan and Ngapugale and the Hlaing River about four miles north of Payagon village and meeting the boundary between the Tharrawaddy and Henzada districts about four miles further on.

Thence the western boundary takes a more southerly direction skirting Henzada district till it reaches the boundary between the Henzada and Ma-ubin districts near Yegangon village. Thence it separates the Ma-ubin district from the Insein district along the Letawe and Negya and the Pakun streams till it reaches the Bawle River just above Bawle village. The western boundary then follows the windings of the Bawle River past the mouth of the Kokkowa River till it reaches the village of Gonnyindan where it leaves the river and strikes south along the Pandaing stream till it meets the Panhlaing River at Myage village directly opposite the western boundary of Syriam district.

Thence the southern boundary follows the Panhlaing

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1 *See* Appendix I.

2 General Department Notification No. 133, dated 23d March 1912.

River, which separates the district from that of Syriam, till it reaches a point about half a mile above its confluence with the Hlaing River. Here it meets the border of Rangoon Town district and leaving the river cuts across the promontory between the Hlaing and the Panhlaing, crosses the Hlaing and follows an irregular course along the Rangoon Town border crossing the Rangoon-Prome Section of the Burma Railways about a mile north of Kemmendine station, the Rangoon-Mandalay Section just beyond Malwagon station, and the Pazundaung River near Eywa village, until it reaches the Pegu River, which separates the district from that of Syriam

AND POSITION.

On the south the district touches latitude 17° and on the north latitude 17° 47′, on the east it touches longitude 96° 30′ and on the west longitude 95° 49.′ Its area is 1,950 square miles—less than a fifth of the area of the original Rangoon district--and its population in 1911 was 265,245

NATURAL AND ADMINISTRATIVE DIVISIONS.

The administrative divisions are given in Volume B and their history is traced in Chapter XIV. The subdivisions were formed under the same notification as was the district Taikkyi, Insein and Hlegu have long been townships but Tantabin was only formed out of the old Taikkyi and Insein townships in 1909 under the authority of General Department Notification No. 36, dated 28th January of that year. The boundary between the old townships on the north-west was the natural one, the Hlaing and Kokkowa Rivers, but the new boundaries are by no means so. The cause was no doubt an attempt to arrange that each of the township headquarters should be near the centre of its township but the boundary near Insein Town is not the most convenient for the people and may be altered before long. Thus the people who live in parts of Kyun-U circle on the Panhlaing River in Tantabin township find it much easier in the rains to go to Insein by water than to Tantabin by land though the latter is nearer.

The townships and principal towns and villages are described at length in Chapter XIV The old circles of Aingkalaung and Kasin were divided in order to adjust the boundaries of the lately formed Tantabin township and one of the parts of the latter was called Wataya. The old Yetho circle was divided into Yetho and Bala circles during the Settlement of 1883-84; after this year and before the Settlement of 1899-1900 the old Okkan circle was divided into Okkan and Tabu circles, and four *kwins* Nos. 15. 16, 17, 18 were taken from Sitpin circle and given to Hlegu township.

Circle headmen (*thugyis*) no longer exist except in the circles of Tantabin, Kyun-U, Yetho, Mingaladon, Kondan and Kyaukchaung and though all collect revenue only those of Tantabin and Yetho remain responsible for the land records of their circle. Circle headmen are especially useful in Insein and Syriam districts as much of the revenue has to be collected in Rangoon so that men of standing and authority are required.

Scenery. The scenery of the district is agreeable and varied. No doubt on the south-east and south-west the rice-plains are flat and bare like those of the Syriam district and the monotony of the landscape is broken only by a tank fringed with small trees or a monastery or village half hidden in a grove of cocoanut palms and mangoes, but along the Ridge it is quite different. Glens and little hills are to be seen on all sides. Lofty forest trees spring out of thick jungle growth and from gaps in the trees shading the red laterite road one may enjoy beautiful and extensive views of the plains on the east and west. In the north-east, the region liable to floods, the characteristics of the delta recur to some extent but the irregularity of the ground takes away the reproach of flatness and the woods and patches of elephant grass and sheets of water slowly drying up in the hot sunshine greatly relieve the monotony. The prospect everywhere gives pleasure by the richness and variety of nature's gifts. In the north-east the plains give place to thickly wooded country gently rising to the foot of the Pegu Mountain Range; the views are not extensive but the fields and woods cannot fail to delight every lover of natural scenery. In the extreme east there are the Forest Reserves with their dense growth and stately trees and in the extreme north-east cultivation has been carried far into the glens running between the foot-hills. Here the jungle differs considerably from that of the plains and strange vegetation covers the round hills. Game is more plentiful and bear, tiger and elephant have to be reckoned with by the adventurous traveller or even by the solitary cultivator returning to his village after sundown

In describing Insein district it is impossible to forget its rivers. A searcher for natural beauty would be well rewarded by a voyage up the Panhlaing and Bawle but most of all the Hlaing River especially near Tantabin where the eye rests with pleasure on broad stretches of water suggestive of lakes rather than a river, and low, green islands which sometimes hardly seem to leave a passage so closely are they set together, and in the upper reaches

where the river is full of abrupt turns and its banks are covered with fruit gardens and the long, single-streeted villages seem almost continuous. Here and there a more carefully kept garden half screens a dark carved teak monastery or the grass breaks through the dull brown brickwork of a crumbling pagoda.

Hills. The district is very varied in its physical features The Pegu Mountain Range (the "Pegu Yoma" in Burmese) may be said to end in the south of Taikkyi township and then degenerates into a ridge of land raised above the rice plains which becomes lower as it advances southwards and finally ceases inside Rangoon Town. This ridge forms the southern part of the western boundary of Taikkyi township, enters Insein township at the village of Wanetchaung and then, under the name of the Ridge or "Kondan" divides the township in half. On the east lies an immense plain almost entirely cultivated with rice and watered by the Pazundaung and Pegu Rivers; on the west the ground slopes rapidly to the Hlaing River. This is the only range in the district and there are no isolated hills The country west of the range is a flat plain cut into blocks by the Hlaing, Bawle, Kokkowa and Panhlaing Rivers.

Lakes. Rangoon water-supply. The only lakes of any importance are the Hlawga Lake, a shallow, artificial reservoir about 17 miles north of Rangoon made by embanking the western and southern sides of a long, narrow valley in the Ridge between the villages of Hlawga and Tankkyan, and the Kokine or Victoria Lake, a shallow, artificial, irregular sheet of water about a square mile in area on the border of Rangoon Town and partly within it. A description of these really involves an account of the water supply of Rangoon City In 1872 its population was just under 100,000; in 1881 it had risen to 134,000 in 1891 to 180,000, in 1901 to 234,000, and in 1911 to 293,000. The need of a water supply was felt as early as 1873. Water was drawn by gravitation from the Royal Lake in Rangoon itself in 1876 but this supply proved insufficient and in 1884-85 recourse was had to the Kokine or Victoria Lake It contains when full about 928 million gallons and is connected with the Royal Lake in Rangoon, 3 miles away, by a 30-inch cast-iron pipe. In 1890 the Shone Sewage System was introduced demanding more water and the population had so increased that a further supply was found necessary and a Committee was formed to consider a scheme to extend the Victoria Lake and make filter beds and to build a high level reservoir with the necessary pumping plant The Local Government sanc-

tioned only the last part of the scheme but the reservoir which was set up on the Shwe Dagon Pagoda Hill was brought into use in 1894 and gave considerable relief. The Ridge was then explored and a site for a new reservoir was discovered in what is now the Hlawga Lake and plans and estimates were prepared in 1894.

At the same time the alternative of obtaining water from deep tube wells was discussed. The danger of a water famine was always present but it was only in January of 1902 that the work of constructing the dams was begun on the Hlawga Lake by the Public Works Department with funds supplied by the Municipality of Rangoon. By June of 1903, however, about 80 per cent. of this work had been finished in spite of an outbreak of fever among the coolies after the rains of 1902 and great scarcity of water during the hot weather of 1903. The labour was supplied mostly by Indians from Orissa and Coringhi but an interesting experiment was made in bringing down a gang of stalwart hillmen from a tribe called Meinthas. In spite of special arrangements which were made to supply them with their necessary medicine, opium, a great number died of the malaria which seems always to accompany the breaking up of new soil in Burma, and finally they returned to their homes The rest of the earthwork gave some trouble as contractors demanded very high rates but all the dams were completed in 1904. Work which had begun on the pipe-line in April 1903 was pushed on rapidly by day and by night in spite of heavy rains and was practically finished by the end of 1904 and on the 22nd of February 1905 the Lieutenant-Governor performed the ceremony of turning on the new water supply. Subsidiary works remained and were completed about June of 1905. In September of that year a heavy slip occurred at dam No. 3 and a leakage at dam No. 2 but they were repaired in the dry season of 1905-06 and the whole work was finally handed over to the Municipality on the 1st of July 1906.

The Hlawga Lake was formed by embanking parts of the western side and the southern end of a long narrow valley lying north and south and deepening to the southwards No. 1 dam closes the southern end and the others fill in the gaps between the hills which form the western side of the valley. The basin of the lake is about 7 miles long and from 1½ to 2 miles wide and when full to weir level the lake covers an area of 4¾ square miles or 3,040 acres. The catchment area is about 10¼ square miles or 6,560 acres.

The general level of the bed of the lake is R.L. 35; the

lowest sluice is at R.L. 40 and it was proposed to draw off water to R. L. 43. The capacity of the lake between drain off level (R.L. 43) and weir level (R.L. 65) is 12,500 million gallons. There are nine main dams and numerous small ones. They are built of earth and have a crest width of 20 feet with a front slope of 3 to 1 and a back slope of 2 to 1. Their front slopes have been pitched with either stone or laterite up to crest level (R.L. 70) and turfing has been done throughout on the back slopes The road from Hlawga Railway station to Taukkyan village on the Prome Road ran through the bed of the lake between dams Nos. 5 and 6 and had to be diverted round the north end of the lake for a distance of four miles at a cost of Rs. 62,741. The road is metalled throughout and has timber bridging. It is now one of the prettiest roads in the district curving and undulating among beautiful forest and giving a fine view of the northern extremity of the lake. It would make part of a splendid circular motor-drive for the people of Rangoon if the footpath between Tanyingon on the edge of the Mingaladon Golf Course and the Town of Hlawga were converted into a good road.

The catchment area of the lake has been enclosed with about 15 miles of iron wire fencing. The cost of fencing including carriage and erection came to about Rs. 1,400 per mile. The only permanent bungalow erected was the one at No 5 dam Temporary quarters were provided for the Assistant Engineer and Subordinates at dams Nos. 1 and 5. A temporary hospital for 24 beds and a temporary Police-station were maintained at No. 5 during the construction of the dams. On a hill about the middle of the western side is the Thadugan Pagoda from which a fine view of the lake can be obtained It was at first intended to remove it as it was feared that the water might be polluted at the time of the annual festival, but precautions were taken instead to prevent access to the water and this fine landmark has been preserved.

There are many other bodies of water but all in the plains west of the Range, all of small size, and mostly to be found in the circles of Aingkalaung and Bawle which have physical characteristics different from the rest of the district. These lakes are broad and deep at the end of the rains but gradually shrink and in many cases dry up entirely. They are thus valuable as fisheries and afterwards as grazing-grounds, being then covered with rich grass. A list of those which are leased for fishing is given in Volume B.

Rivers. The watershed of the district is the Pegu Mountain Range and its continuation, the Ridge, and from it rise the tributaries of the Hlaing and the Pazundaung Rivers. Of the former the chief is the Okkan stream flowing with many sharp turns westwards through the Tabu and Okkan circles and joining the Hlaing at the village of Tabuwa. Fed by springs it is never quite dry even in the hot weather. It emerges from the hills a narrow gorge but some 15 miles from its mouth it widens without straightening and in its beds, present and abandoned, are grown crops of tobacco, sugarcane and vegetables such as chillies, brinjals and beans and gourds of various kinds Further south is the Gyobyu stream. These are both in Taikkyi township and of little use as waterways. In Insein township the Hmawbi Stream rises near Wanetchaung, flows southwards through the village of Hmawbi which gave its name to the old township, and then strikes westwards through Minywa village entering the Hlaing at Hmawbi Chaungwa.

The Hlaing River itself rises in the Tharrawaddy district in the Pegu Mountain Range, enters the Taikkyi township about five miles above the mouth of the Okkan stream and flows almost directly south through the district till it meets the Panhlaing River at the boundary between it and Rangoon Town district. It has no tributaries on its right or Western bank because only level plains lie between it and the Irrawaddy, but at Tawlate in Bawle circle it divides into two branches, one continuing its course southwards under the same name and the other flowing westwards under the name of the "Bawle River" to Bawle village, where it turns southwards and forms the western boundary of the district until just before it meets the waters of the Panhlaing at Mezali in Ma-ubin district. Its only tributary is the Pakun stream which enters it at Bawle and also bounds the district. The Kokkowa River is merely a creek connecting the Bawle and Hlaing Rivers and separating Bawle and Tantabin circles.

The Panhlaing River leaves the Irrawaddy at Yandoon, meets the Bawle River at Mezali in Ma-ubin district and then reaches the border of the district which it skirts as it flows eastwards to meet the Hlaing. The chief tributaries of the Pazundaung River in the district are the Thein-gyaung, Bala and Malit streams The first separates the Sitpin and Kyaukchaung circles and drains both; the second separates the Yetho and the Bala circles of Insein township; and the last divides these from Hlegu township.

The Pazundaung River enters the district at its con-

fluence with the Malit stream and flows in a south-westerly direction till it touches the Ridge at the village of Thayetkon, then turns sharply to the south-westwards till it meets the Theingyaung stream on the border of Kyaukchaung circle and then returns to its old direction and keeps it till it reaches the Rangoon River south of Rangoon Town.

The Pegu River which flows from the east in the south of the district is much larger and forms the boundary between the Insein and Syriam districts for many miles.

Besides the streams mentioned small creeks leave the rivers and penetrate far into the plains. The important point is that all these rivers, streams and creeks except the Okkan and Gyobyu are tidal and navigable so that it is very easy for the inhabitants to travel within the district and its surplus rice is quickly and cheaply carried to the central market, Rangoon. With the exception of the Okkan and Gyobyu they have all muddy beds and in the south of the district are fringed with nipa palms (dhani) but in the upper waters of the Bawle and Hlaing there are also stretches of sand. These two and the Panhlaing often overflow their banks and destroy the crops but they leave too a fertilising layer of silt The Okkan stream lies in too deep a bed for this but the Gyobyu stream does so, frequently changing its bed and depositing both silt and sand along its course.

The drainage east of the Hlaing is thus from east to west in the northern half of the district and to both east and west from the Ridge in the southern half West of the Hlaing there is hardly any drainage at all as the rivers are raised above the plains and much of the water escapes from them by evaporation.

Islands.

Though the district nowhere reaches the sea the salt water which comes up with the tides does considerable damage to the crops on the banks of the creeks. The more enterprising of the cultivators keep it out by small embankments. A little of it, however, is said to be beneficial. There are a few islands. They lie in the Pegu, the Panhlaing and the Hlaing Rivers and are mostly covered with nipa-palms (dhani) and grass and small tree-jungle, and those in the Hlaing are very useful as stations for collecting logs of timber and arranging them in rafts for conveyance to Rangoon. They also furnish various kinds of grasses for mat-making.

Water-supply.

Drinking water is obtained from wells and rain-fed tanks and from holes scooped in the sandy beds of streams The tanks are found almost entirely in the deltaic parts of the

district between the Hlaing and the Panhlaing and along the valley of the Pazundaung. The Burmans prefer tank water. There is an ample supply of water for all purposes except sometimes in the south-east of Myaungtanga circle, *e. g.*, at Pugyi. That drawn from the laterite soil of the Ridge is considered the best and Insein has a great reputation for its drinking water.

Climate. Seasons

Like the rest of Lower Burma the district has roughly three seasons, the hot weather during March, April and May, the rains in June, July, August, September and October, and a dry and cool weather in November, December, January and February. It has been noticed for the whole of Lower Burma that the hottest months are the healthiest and the coolest and wettest months the most unhealthy and no doubt the same fact is true for the district. Its excellent communications render it very liable to the spread of epidemic diseases. The main crop, rice, is planted in the rains and reaped in the cool weather, minor crops such as tobacco and maize are gathered later, fruits like mangoes and pineapples later still and in the early rains, while vegetables are grown all the year round.

Temperature.

The temperature has a considerable variation which seems to be greater in the months from December to April, the dry weather, than in the rest of the year. The temperature reaches its maximum in April, May and June when the heat is rather trying though the nights are fairly cool and it is not necessary to sleep under a punkha. They are more sultry in September and October at the end of the rains. The sea breeze tempers the heat in the southern part of the district and the northern part is slightly warmer and drier. More annoying than mere heat are the swarms of insects, flying ants and others less savoury which often invade houses in the rains and make eating and reading almost impossible.

Winds

The prevailing winds during the rains (June to October) blow from the south or south-west. Towards the end of the rains the winds become more variable till December when they usually blow from the north or north-east and continue to do so till February when they again become variable before settling down to the south and south-west.

Rainfall.

The cultivators divide the rainfall into early, middle and late and of these the last is perhaps the most important especially for the higher lands where it is more difficult to keep the water in the fields especially if the soil is porous.

The following table shows the rainfall and the number of rainy days at six stations of which two are in Rangoon

Town, two are in Insein township (Hlawga Lake and Hmawbi), one just over the northern border of Taikkyi township, Tharrawaddy, and one Zalun, some miles beyond the western boundary of Tantabin township.

Station	Rangoon		Kokine Lake.		Hlawga Lake		Hmawbi.		Tharrawaddy		Zalun.	
	Average for 20 years.		Average for 20 years		Average for 5 years.		Average for 16 years		Average for 20 years		Average for 20 years.	
	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)	(a)	(b)
January—March ...	1	1	.	1	...	1	1		1	1	1	1
April	2	2	.	1		1	1	1	2	1	2	1
May	11	18		12·5		15	16	13	10	9	12	10
June	21	17	.	17·[illegible]		20	24	20	20	16	22	16
July ..	21	19	..	20		19	23	21	25	20	24	20
August	24	21	...	20		20	25	23	21	19	23	17
September	20	15		16		11	19	19	19	12	17	11
October	10	7	...	6	..	7	8	5	9	5	10	5
November	3	3	...	1	.	3	1	1	8	2	2	1
December			.		.		.	.	1		1	
Total ...	119	97	.	94		97	118	102	124	85	114	88

(a) Rainy days | (b) Rainfall in inches

From this table it appears that the rainfall decreases as one goes northwards from the sea coast. The cases of Hmawbi and Hlawga Lake are exceptions but the figures of the former are probably not so accurate as those of the other stations and those of the latter are available for only five years. It also shows that the rainfall in the first four months of the year is almost negligible, about 2 inches that from 9 to 15 inches fall in May and that the rainfall then gradually increases month by month till it reaches a maximum in August (though sometimes in July) and then decreases sharply in September, again drops suddenly in October and practically ceases in November. The rainfall is ample for the needs of the district but its distribution is not always favourable to agriculture.

Unhealthy parts

The healthiest villages are probably those in the open rice plains where there is little or no shade and the winds blow without hindrance. In wooded villages there is not enough draught and mosquitoes are numerous. The unhealthiest part of the district is perhaps Tabu circle east of the Railway line—what might be called the "terai" of

the district. Hmawbi and Wanetchaung used to have bad reputations but seem to have become much healthier.

Statements of temperature and rainfall from 1901 for the Hanthawaddy district as it existed just before the partition of 1912 are given in Table I, Volume B.

Geology.

For the discussion of its geology the district may be divided into two parts; the Pegu Mountain range and the rest of the district. The geology of the former is described shortly in Chapter V. There is no feature of geological interest peculiar to the latter; it shares the characteristics of the surrounding area, the most obvious being the total absence of all formations laid down earlier than the pliocene era.

According to the classification adopted by Theobald the strata observable are only three in number, the newer alluvium, the older alluvium and the fossil wood group. The newer alluvium consists of three kinds, *viz.*, blown sand, mangrove swamp and recent alluvium The first hardly occurs in the district; the uncultivable mud lining the creeks composes the second; the third is a layer of clay, strictly superficial but difficult to distinguish from the older alluvium. Along the riverbanks there are two feet at most of this surface soil but further away from the stream the deposit of river silt is more trifling still. The superficiality of this deposit is ascribed to the low level and small inclination of the ground. In the early rains the rapid streams from the low hills contain a coarse sediment; when their flow is checked on reaching level land this settles down and forms a barrier intensifying the action of the causes which led to its formation. The country is thus flooded as it were with filtered water, and the silt-laden flood of the main stream is confined within a narrow area. The deposit of this barrier accounts for the saucer-shaped formation of the islands which constitute the deltaic and western portions of the district.

The older alluvium also consists within the limits of the district of three kinds; the older alluvium clay; sands and gravels: and laterite. The older alluvium clay is homogeneous, of light colour and very deficient in lime. The sands and gravels and the laterite are found in the range of low hills, known as the ridge or 'Kondan" continuing the Pegu Mountain Range southwards.

The third stratum, the fossil wood series, rarely crops out in the district. Fragments of silicified wood, however, have been found in the neighbourhood of Rangoon of such size and nature as to necessitate the recognition of this run-series.

Geological history.

The geological history is therefore almost entirely modern. In the eocene era of the tertiary period the Pegu Mountain range, the oldest formation of the old Hanthawaddy district, was not yet outlined as a pucker of the earth along the bottom of the great ocean then bounded on the east by the triassic rocks of Martaban. It is apparently more recent than even the Arakan Mountain range, and hence was laid down parallel to it and the lofty range east of the Sittang. The delta itself rose above the waters in proto-historic times; there is abundant reference to this emergence in the early history and legends of the country, while geological proof is found in the great depth of the older alluvium, which can satisfactorily be accounted for by no other supposition.

Economic geology, soils.

The soils of the low-lands vary from sandy loam to stiff clay. Considering the area as a whole they may be regarded as remarkably homogeneous, but there may be great differences of fertility between pieces of land lying quite close to one another; these differences depend rather on the water-supply. Stiff yellow clay is the worst of all and is found to a great extent in the infertile Pazundaung valley. The formation in the circles of Bawle and Aingkalaung is peculiar. To the depth of about 15 inches a rich black soil is found and beneath that a hard yellow sand. The upper soil has perhaps been deposited in the form of silt from the surrounding rivers and the flood-waters of the Irrawaddy which still break into these circles once every two or three years.

Clay

The clay is suitable for making bricks and pots and in various localities these are turned out in considerable quantities.

The most important economic characteristic of the older alluvial clay is its special adaption to the rice industry. Theobald in comparing it to the Bengal alluvium was of the opinion that although equally suitable for the cultivation of rice, it was not so favourable for the production of crops, such as indigo, opium, sugar, oil-seeds, etc. The newer alluvium which resembles the Bengal alluvium would yield these products, but in Insein it is sparsely distributed and liable to floods.

The laterite is used for making roads, but it is too deficient in iron to be a good road material. Formerly it was used for the construction of pagodas.

Fauna.

Large game other than pig and hog-deer are practically unknown except in or near the forest reserves. These find seclusion, not entirely undisturbed, in elephant grass

and scrub jungle. Tigers are often heard of near Wanetchaung, Pugyi and other towns near the forests. In the extreme north-east of Taikkyi township pig and especially elephants do a great deal of damage to rice-fields and gardens and many fertile hollows are left uncultivated on their account. Among smaller quadrupeds the rat is of economic importance, affording an article of luxury to eke out the diet of Madrassi coolies, who dig it out by night. Formerly it was responsible for wholesale destruction of the crops, but it is now chiefly found in the flooded parts of the district especially Bawle and Aingkalaung circles, where in some years it works considerable havoc in the rice-fields.

There has been no systematic study of the ornithology of the district. The birds are mostly water fowl of the less edible varieties. There is good snipe shooting at various points along the Prome Road and the Rangoon-Mandalay Railway.

Crabs are found in the rice-lands near the Rangoon and Pegu rivers and do slight damage to the rice plants. The fish of the district have never been studied apart from those of the rest of the delta. A crocodile is occasionally seen near the mouths of the larger rivers.

The snakes call for no particular mention. The most feared are the cobra and the Russel's viper, especially the latter which causes several deaths yearly at harvest especially in the flooded parts of the district such as Bawle and Aingkalaung circles In fact the cultivator who can afford to do so often hires men to reap in order to avoid the danger of being bitten.

Leeches are very bad in the hollows of the Ridge especially near Insein There are two kinds: the small "kyut" found among the sensitive plant and the large "hmyaw" found in the streams. The following is a short list of the fauna of the forests of the Insein district with the habitat:—

Name.	Habitat and remarks.
Elephant ...	Hills forests: occasionally in plains.
Bison ...	Hills forests
Saing .	Do.
Sambhar ..	Hills and plains forests
Gyi (barking deer)	Do.
Hog-deer .	Plains forests.
Thamin ..	Plains forests near Kinpadi. degenerate species (small).

Name		Habitat and remarks.
Serow	...	Hills forests.
Rhinocerus	...	Do.
Tiger	...	Hills and plains forests.
Leopard	..	Do.
Panther	...	Do.
Jungle cats	...	Various species. Hills and plains.
Bear		Hills and plains.
Pig	...	Do
Iguana	...	Do.
Squirrels	..	Numerous species Hills and plains.
Badger	...	Hills and plains
Porcupine	...	Do.
Tortoise	.	Do.
Pheasant	...	Do.
Jungle fowl	.	Do
Peacock	..	Very rare. Plains.
Quail	...	Plains.
Partridge	.	Hills and plains
Imperial pigeon		Hills and plains. Various species of each.
Green pigeon		
Doves		
Hornbill	...	Hills and plains.
Owl	.	
Pelican		
Hawks	.	
Minas and hundreds of other kinds of birds		
Snakes	..	Everywhere
Leeches	.	
Ticks		

Flora. The flora of the district has never been systematically studied. There is a difference between the plants found in the rice-fields and on the grassy slopes of the Ridge. Among the former are "*Wetla,*" "*Kad*;" "*Sinnha-maung;*" "*Dangywe*:" "Sea sessamum" (*hnan pinle*) blooming in December and January, the thorny "*supa-daung,*" a species of *Scrophulaceæ*; and various grasses, such as '*myeza,*" "*beza,*" "*baw*" and '*siango*' The sensitive plant (*tikayon*) spreads along the little embankments between the fields especially in the neighbourhood of the Ridge over the whole of which it is spreading with great rapidity.

A few stunted "*pyinma*" (*lagerstræmia flos reginæ*) mark the sites of former villages, and the red agati

(*paukban-ni*) here and there remains as a memorial of the former April splendour of the forests in the plains. The trees found most often in the villages are the white agati (*paukban-byu*) of which the leaves are edible. They are grown, however, chiefly for the beauty of their long glistening pods. They are mostly found on the borders of the drinking-tanks, but give very little shade. Another very favourite tree is the "*Hningyainglon*" (*A arabica*) which in the early year is covered with a mass of sweet-smelling yellow blossom. The holly-leaved blue trumpet-flower "*Kayabin*" (*Acanthus ilicifolia*) lines the creeks and its root pounded up in water is considered an infallible specific against the bite of the water-snake Another shrub with a similar habitat is the "*Kayubin*" (*Pluchea indica*). A few henna are still found in the plains, but they are no longer much used for dyeing The varieties of the hibiscus are many. One of the most noticeable of the creek plants is that known as "*ko yan gyi*," a kind of arum, and the most beautiful flower in the district is the water jasmine. In the tanks grow red and blue and white lilies which are of great beauty.

On the slopes of the Ridge flowering trees and flowers generally are more common. The "*Chwye danyin*" with long purple pods is one of the most imposing, and the "*gyibin*" although uncommon, one of the most remarkable. In April the fallen blossoms cover the earth beneath the tree as with a layer of red wax. The "*mezali*" with yellow flowers and the "*inbok*" are found in great numbers Some of the plants have apt descriptions in Burmese. The *Momaka* (*Tamarix gallica*) of which there are two varieties, one a willow and one flowering with yellow flowers in November, are so named because they do not mind the rain. The "*maung ma kaw*" is so styled because salad made of its leaves is so excellent that no wise man would share it with his brother. Among plants of economic use are the wild hemp (*paiksanbin*) indigo, and the *Thanbinban*, which is used in dyeing threads and baskets. There are usually sweet-smelling flowers in the monastery compounds, such as *Za.et*, *Kadeik-pin* and *Taloksaga* (*champac*). But among the people generally the favourite plant seems deservedly to be the red hibiscus which is often combined as hedge and arbour with the pink New Zealand creeper.

The flora of the forests of the district is described in Chapter V. The only well wooded part of the district outside them is the Ridge and the extreme north east of the Taikkyi township. Nearly all the trees in the other parts

have been cut down to make rice-fields and the age of a holding can often be judged from the number of trees or stumps still left in the vicinity.

CHAPTER II.

History and Archæology.

PART I.—PRE-TALAING HISTORY.

Geographical limits.

Of necessity there must often be a conflict between tradition and utility, and it cannot be expected that an area constituted artificially for the convenience of present-day administration should form a true historic unit. Thus in tracing the history of Insein district it is necessary to disregard such limits as are for the time being officially appointed and throughout the first four parts of this chapter the district referred to is the Hanthawaddy district as it existed just before the partition of 1912. The district takes its name from a city, which developed successively into a kingdom and an empire Even however from the earlier days of its expansion the name was particularly applied to the home province, the seat of government. When the Burmans succeeded the Talaings this still remained intact as an administrative area. On the British occupation the name passed into desuetude for twenty years, but was revived when the administration of Rangoon Town was separated from the rest of the district Thus the district only covered an insignificant portion of the older province, while Syriam and Twante which until recently formed part of the British district were never incorporated in the Burman province.

This is not the only historical anomaly. The earliest history centres round Rangoon. The later founded city. Hanthawaddy, the Pegu of the present day, succeeded Rangoon as focus of the vital forces of the neighbourhood. Neither Rangoon nor Pegu are included within the limits of the district It is easy then to comprehend the need of going beyond the actual limits of the district for an explanation of occurrences within its area. This is adverted to by Captain Lloyd in his Gazetteer of 1868 and subsequent changes have not diminished the necessity.

The seven periods.

In one sense it may be said that Hanthawaddy has no history: from another point of view it may be maintained however that it has too much. To the historian who sets

himself to trace out some increasing purpose, the rise and fall of dynasties and empires in Pegu will offer no attraction. But one who is contended to disentangle from the details of chronology some figure worthy of remembrance will find them worth his study. For this is the characteristic feature of the Hanthawaddy annals: they are episodic. At one time the merchants who throng the ports of Cyrion and Ansidei gather a rich harvest from the villages of the interior —so thickly set that "if a plate be broken on the seacoast it is heard of the same evening in Toungoo." In a few years' time all these towns and villages are overgrown with jungle and at distant intervals a few miserable hamlets line the deserted creeks.

The episodic character is not without advantage to the student, for the history falls naturally into isolated cycles of progress and decline. The first stage, pre-Talaing, ends with the foundation of the city. Hanthawaddy. The second period relates the fortunes of the first dynasty until the invasion under Anawrata. The next period is one of gradual recuperation until under Wareru the capital is moved from Hanthawaddy to Tenasserim. Then three stages deal with the three successive empires of Pegu; these are followed by the period of Burman domination which in turn gave place to the British occupation.

[E]arly [g]eogra[ph]y.

Although in the earliest traditions of Hanthawaddy there is ample material for conjecture, it is not sufficient to prove conjecture true Numerous legends both Burman and Talaing indicate that even some centuries after the begining of the Christian era an inlet of the sea extended over the whole deltaic country reaching north so far as Prome, and leaving the higher land an archipelago of tree-clad islands. There is good reason for believing that cities, such as Thatôn, now far inland were at that time situated by the sea. The present remains of Portuguese docks at Syriam [1] show that even within the last three hundred years much land has been reclaimed. An examination of the physical conditions has led geologists to the same conclusion [2]

It may be accepted with some degree of confidence that this archipelago was studded with Hindu colonies, engaged in trade presumably with China, that there was an indigenous population, not of Talaing stock, and that from at least the second century of the Christian era the Cambodians were consolidating their position on the east. An

[1] Settlement Report, 1880.
[2] Geological papers on Burma : *Theobald.*

enquiry along these three several lines is necessary to an elucidation of the early history of Hanthawaddy.

The primitive indigenes.

There is a legend, much in vogue among the people of the delta which purports to account for the origin of life in Twante. Sifted of extraneous matter this may possibly convey a picture of the earliest inhabitants. If the jungle-child who figures as the hero may be taken as a prototype of these they had but few accomplishments. They fared on fish, shell-fish especially, which they obtained in tidal limits, and therefore presumably were unacquainted with the use of boats; they had not learned to use the bow, and can have had little skill in warfare; they did not know the drum, and were thus ignorant of music, they were even innocent of clothing If however there is anything in the legend they had learned to kindle fire [1]

Forchhammer was of opinion that they were Taungthus, [2] who have affinities with the Karens but the Taungthus are described as pre-eminent in music and proudly claim the invention of the drum. [3] Forbes thought that they were a Mon-Khmer tribe, [4] and it is the opinion of Dr. Grierson that "some form of Mon Khmer speech was once the language of the whole of Further India." [5]

To these people must in all probability be assigned the stone implements which have been found. They are peculiar for their small size, in being carved with shoulders and in being sharpened chisel wise, instead of being ground down on both sides after the ordinary manner like a hatchet. [6] Similar remains have been found in Chota Nagpur, but not, it appears, elsewhere in India or Europe. No information seems to be forthcoming as to how far they resemble those of the Malay Peninsula. But suggestions have been made that these early inhabitants belonged to a primitive race, widely spread in early times over the south of India, Indo-China and Polynesia There is a considerable correspondence between the Mon Khmer languages and that of the Santals of Central India on the one hand and various Austronesian languages on the other. A table of the relationships between these tongues was published by the French oriental school in 1908[7]. The people, who speak

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[1] Syriam Yazawin and Lloyd's Gazetteer
[2] Note on Antiquities, and Jardine Prize Essay.
[3] Ramannadesa, Taw Sein Ko.
[4] Forbes' Further India, p. 20.
[5] Linguistic Survey.
[6] Forbes. op. cit, p. 157.
[7] Bulletin, June 1908.

them at the present day are certainly of divers races, and it would seem that they owed the common features of their languages to some primitive people, a branch of which must have found its home in Hanthawaddy prior to the arrival of the Talaings.

The Hindu colonists.

Although the unanimity of tradition is alone sufficient to render it certain that there was at one time a close connection between India and Hanthawaddy there is little corroborative detail. The legends of the country would trace the connection back to the lifetime of the Buddha. The Mahavamsa, a history compiled in Ceylon in the 5th century, relates the despatch of the Buddhist missionaries, Sona and Uttara, in 308 at the end of the Third council to Suvannabhumi, which is identified with the Talaing country If this account can be accepted it is clear that intercourse with India must by that time have been long established. But there are grounds for considering the passage as a later interpolation.[1] If the Burman chronicles can be accepted with reference to the eras of local chronology in early days it is certain, however, that Hindu influence must have been active in Hanthawaddy by A. D. 78, for in that year the King of Prome abolished the era of religion, and substituted a new era known as the Dodorasa era. This is the Saka era of India.

From 180 B C onwards the Andhra dynasty was supreme over the whole of Middle India. Their members were fervent Buddhists and notable merchants trading both by land and sea from Rome to China. It would appear not impossible that the colonists who settled along the coasts of Hanthawaddy were people of this nation. It is certain that sometime before the Talaings had entered Hanthawaddy there were pagodas, many of them built of laterite, extending from Syriam and Twante to Pegu and Thatôn. These are undoubtedly among the oldest monuments in Hanthawaddy.[2] They form the subject matter of a series of legends relating to the Hindu colonists and some of them, as is also the case with the Petleik, one of the oldest pagodas at Pagan, are so old that all tradition of their origin has been forgotten. In the Thatôn pagodas of this series the sculptures have been held[3] to correlate them with the buildings of Orissa. Each group of pagodas may be taken to represent the site of one of these settlements One of them occupied the laterite ridge

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[1] Taw Sein Ko : Buddhism, Vol 1, page 599.

[2] Similar remains recently discovered in Siam have been held to date from the beginning of the Christian era.

[3] British Burma Gazetteer, 1879-80, Vol. 1, pp. 716-7

running from Syriam to Pada; there was another at Twante and numerous towns were grouped in the vicinity of present-day Rangoon. It can not be determined how far these different settlements were coeval, and it is probable that at least their relative importance varied from time to time with the shifting of the river and the convenience of trade: the site of Rangoon however would seem always to have been one of the more important centres The fact that some of these settlements are traditionally known by Sanskrit instead of Pali names affords a clue to the date of their establishment. Thus the best known of them was Utkala Nagara, "the town of Utkala" Utkala is the Sanskrit form of Orissa; in Pali, a later and more euphonious form of speech, it was softened into Ukkala Trikumbha Nagara was a town, 'the town of the Three Hills," comprising the site of the Shwe Dagon Pagoda. The Pali form would have omitted the "r" and it was from this Pali form that Forchhammer considered the name Dagon or Tigum to derive It has been held that these names are "suggestive of ethnical and historical relations with Hinduic rather than with Buddhist. India."[1] Buddhism was predominant in India from 250 B C to 350 A.D, so there is good reason for considering that these cannot have been founded subsequent to the latter date, and the argument from nomenclature lends some force to the possibility that they were established before the earlier date.[2]

These colonists appear to have been driven out by the Talaings about the 5th Century A.D. It is perhaps significant that by this time the Andhra domination over central India had come to an end The period and relations of these Hindu colonists is of some importance in the history of Hanthawaddy as to them is traditionally assigned the honour of introducing Buddhism Although the evidence is insufficient to regard this as established history it does not conflict with a provisional assumption which seems to be in accordance with such evidence as is forthcoming It may be considered then as more than possible that the coasts of Hanthawaddy were colonized from India not later than 200 B.C., that the people came from the east coast by way of the sea, their probable origin being the country between the Mahanadi and Godaveri, that the colonists were Buddhists at the time of their arrival or shortly after; that

[1] Forchhammer, "Shwe Dagon."

[2] On the relation between Pali and Sanskrit, see Rhys David's *Buddhism*, Vol. I. page 249.

they formed the eastern limit of a trading empire which linked China up with Rome; that about 300 A.D. internal trouble weakened their power in India, and left the colonists comparatively defenceless before the rising power of the Talaings

Relations between Indigenes and Colonists.

Seeing that even the existence of the indigenes and colonists is not free from doubt little information can be expected as to their mutual relations. Presumably there were raids and punitive expeditions, and this presumption is strengthened by the earliest legend of Syriam. This tells how a native of the island overcome the ruling dynasty at Pada, and fortifying Syriam, inaugurated a period of native rule [1]. The laterite remains at Pada suggest the former existence of a Hindu colony at this place, and it appears that the island did not become subject to the Talaings until some centuries after the foundation of Hanthawaddy [2] The legend is not therefore devoid of probability, but tradition has such a way of playing shuttlecock with the centuries that any basis of fact which the legend may possess may relate to an entirely different period.

The Cambodians.

The third influence presiding over the birth of Hanthawaddy was that of the Khmers, the inhabitants of Cambodia. Here as in Burma and Pegu an Indian civilisation appears to have been grafted on a Mongol stock. The closer connection with China and the survival of inscriptions from the fifth century of the Christian era take back their chronology to a period when nothing is possible in Hanthawadny but conjecture. It is said that in 125 B.C. China as the result of a successful war was enabled to levy tribute from them[3]. But in the second century after Christ there appears to have been another influx of Hindu civilisation and in the third century a Chinese ambassador met an ambassador from India at the Cambodian Court [4].

North of these were the Champas, the occupants of old Annam, a people of similar civilisations who advanced northwards until they were checked in the fourth century by the Chinese in Tonkin. The civilisation of both these peoples was Hindu, Brahmanic the classical language of their inscriptions was Sanskrit [5], and although in the seventh century the

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[1] Syriam Yazawin This legend however has incorporated at least one of the Jatakas in the same account.

[2] Syriam Yazawin.

[3] Ferguson II, 373 Ed. 1910.

[4] Architecture Hindoue de Beylie, page 79.

[5] An inventory of these is given in the Bulletin of L' Ecole Francaise for June 1908.

Chinese pilgrim Yi-tsing found a few Buddhists in the country this religion never seems to have made much progress. To this source doubtless must be attributed the traces of Shivaism in Thatôn and Chinese civilisation also must have permeated through this channel. It is significant that while the earlier era of Burma is imported from India, that now employed has been derived from China, [1] and was introduced apparently during the acme of Cambodian civilisation. It has been held that both the Talaing and the Cambodian script derive from the Vengi script of fourth century India, the latter being the medium by which it passed to the Talaing [2]. Forbes with somewhat less probability thought that both received their letters independently from the same source, the Buddhist missionaries of the fifth century [3]

Summary of pre-Talaing influences

Thus at the time that the Talaings founded Hanthawaddy they would seem to have been subject to three influences. The Orissa colonists along the coast were Buddhists of the "Southern" school with their sacred writings in Pâli. These have played the greatest part in moulding the religion of the present day. To the primitive indigents they would seem to have been indebted for some of the commonest words of their language, "ka·" for instance, the Talaing for "fish," is found in various forms from Santali to Polynesia. The Cambodians appear to have been the medium for the introduction both of Brahmanism and the influence of China. Prior to the fifth century the Orissan, and thereafter until the tenth century the Cambodian influence appear respectively to have predominated.

PART II.—The first Talaing Dynasty.

The Talaings prior to the foundation of Hanthawaddy.

From the similarity of their tongue it would appear that the Talaings or Mons formed part of the same wave of Mongol immigration as the Khmers, the people of Cambodia. The latter seem to have led the way down the valley of the Mekong to the plains where at a later period they came in contact with the Hindu element already mentioned The Talaings seem still to have inhabited the uplands, where we still find them when their history, as written by themselves, begins.

At least three versions of the Mon chronicle are in existence; a copy from Tenasserim translated into German by

[1] Taw Sein Ko loc. cit
[2] Jardine Prize Essay.
[3] op. cit p. 17.

P. W. Schmidt, and two Burmese translations, one incorporated in the Syriam *Yazawin*, and one known as the *Razadirit*, which is apparently the copy used by Phayre in the compilation of his history. They must be distinguished from the Traditions antecedent to and amplifying the earlier chronicles, some of which have been collected, some still being handed down only by word of mouth A collection of these is published under the title "*Mon Yazawin.*" Both chronicles and Traditions open with a prophecy of the Buddha concerning the foundation of Hanthawaddy. They represent that at the time when the site of the future city first rose above the waters the Buddha was travelling in Ramanna, the country of the Mons .

"The Master was journeying among the places of the North when He reached the summit of Kara Puppata On observing the pair of *Hinthas*, large and small, circling in the air above the Kara Puppata with their wings clasped in reverence, the Master gave this oracle in the presence of Gawunpati and of Ananda and of the Sekra Lord himself. 'In the place where the *Hinthas*, large and small, are resting shall be set the dwelling of the Razatani Prince, and the limits of their feeding ground shall be the city boundaries."

The limits then described coincide roughly with the limits of Lower Burma between the Arakan mountains and Tenasserim.

The Chronicles are then silent until the founding of the city. In the Traditions the gap is filled with legend. Noteworthy features of the legends are the existence of several petty tribes (principalities are mentioned at Taikkala, Thatôn and Don, Zaingtu, and seven kings unite to attack Gola Nagara), traces of intercourse such as the last mentioned with the Hindu colonists, the alleged visit of Sona and Uttera, Buddhist missionaries ; and the numerous migrations from east to west. They tally therefore with what seem to have been the facts that about the beginning of the Christian era the Talaings were ill organised tribes scattered about the upper waters of the Mekong ; that the rising Hindu power in Cambodia and Champa drove them west and south, where they came in contact with the Buddhist colonies long before established ; and that under this double pressure they acquired a political entity which enabled them to drive out or assimilate the colonists.

After the foundation of Hanthawaddy the Traditions run along two courses, one a barren list of Kings, presumably the princes of Cambodia, the other relating in greater detail the fortunes of the dynasty established by the founders of Hanthawaddy.

Although recent custom has rendered it convenient to talk of these people as Talaing this was not the name by which they generally called themselves. In fact, it is not certain that this style was used at all until the Burman conquest in the middle of the eighteenth century. Two suggestions have been made as to its origin. According to Phayre they took their name from the early colonists along the coast. These are supposed to have been people from Kalinga, the course of time having eliminated the final vowel and modified the initial letter into "t." (1)

Origin of the name Talaing.

Forchhammer pointed out that the Talaings spoke of themselves as Mon, and that there appeared no trace of the former name in their earlier history. He suggested accordingly that the word was a compound formed by the use of a Talaing word signifying "oppressed" as a numerative, and that the term had been invented after the Burman conquest. It has been stated, however, by Parker that the word Talaing occurs in the Chinese chronicles so early as 1603 when it is stated in the Moulmein annals that "Siam and Teleng in consecutive years attacked Burma"(2) In this passage however "Teleng" may signify some tribe of Shans with whom the Burmans were at that time continually involved. No definite conclusion therefore is at present possible.

Foundation of Hanthawaddy.

It is not until the foundation of Hanthawaddy in 514 A.D. that the Chronicles begin. They give a very brief account, but in the legends there is greater detail Thamala and Wimala were the founders. They were the twin sons of Teiktha Dhamma Thitha Raza, the first king of Thuwana Bhumi he was the offspring of a dragon and had been tended as a child by Teiktha Kumara and Thitha Kumara, the sons of Teiktha Raza, King of the "ancient city of Thupeinda." Their mother is also represented as the offspring of a dragon. It was apparently on the discovery of their mother's parentage that they were exiled from their father's kingdom Poda Rathe, the hermit who had tended their mother as a child comforted them in their adversity by recounting the prophecy concerning Hanthawaddy, and announced that they were destined to found the city They set forth towards the West and arrived at the kingdom of Keinne Reze, who ruled at Don Zaingtu. His grandfather, Thamonte Reze, had ruled the city during the lifetime of the Buddha, and had received the Law from Maha Thawaka

(1) Forbes followed Phayre, op cit, page 37.

(2) Burma, page 72, Parker.

and Sula Thawaka, two merchants who had made the journey to the middle country Keinne Reze joined them in their quest. After two years wandering they arrived at Hanthawaddy which is some miles west of Don Zaingtu. Here they found a colony of Hindus. These were descendants of people who had been sent there by Dili, King of Banga, beyond the Mountains on the west, when first he heard of the appearance of the island.

'Shortly after the appearance of the island Dili, King of the twelve cities of Banga, heard of its emergence, and sent a hundred armed men in two vessels with an iron post, fifteen cubits long and seven spans in girth to mark it out as a possession of his kingdom One boat and forty men under a headman were left behind to guard it. Banga was west of the mountain range of Bassein When Thamala and Wimala and Keinne Reze and their followers arrived they trod all over it, as by this time it had become hard. The head of the foreign colony was a man named Sheik Abdulla Law. He asked them why they were prospecting on his island where for more than a hundred years they had been guarding the iron post. The Talaings hautily made answer, "It is our own Mon country of Ramanna, it is not fitting that you *kalas** should come proudly trespassing and mark it as your own. It is within our country, you do not own it, we only are the owners." The Thagya Min warned in the usual manner that something untoward was happening took note of the dispute and came to earth, assuming the form of an old carpenter, Wagaki by name. He welcomes the Talaings and tells them that as a master carpenter he has come to help them to build a palace there according to the promise and prepare a shrine for the relics of Buddha. They inform him of their difficulty, and he replies "Tell them that on the first appearance of the island there were buried in token of Talaing possession nine copper trays, nine iron sickles and a basket of peas. Tell them this, and I the carpenter your father will settle the dispute."

On the day appointed for decision the Talaings make answer as instructed and the carpenter pronounces judgment "Let them dig and see which lies the deeper."

The trays, sickles and peas are found beneath the iron post, and it was evident that they had been buried first. The foreigners admit the justice of the judgment, and making an offering of cloth and fine linen, jewels, gold and silver they pay their reverence and depart. Thus by guile, the prophecy reached fulfilment.'

The long migration from east to west, the situation of the Hindu Kingdom in the west and not across the water to the south, and the helping presence of the Sekra Lord are noticeable points The name of the city also points to Buddhist influence, the Hintha or Hansa having been long appropriated as a sacred symbol.

The first dynasty in Hanthawaddy.

Thamala was the first king and his brother Wimala succeeded him. Attha, a posthumous son of Thamala, was the third prince. It was long before the Hindus ceased endeavouring to regain by force what they had lost by guile;

* Foreigners.

during the reign of Wimala they had nearly gained their point, but Attha succeeded in finally defeating them.

'Thamala became enamoured of a village maiden, but she was not desirous of her destined honour She took refuge in a gourd tree full of flower, and was therefore known as "Queen of the Golden Gourd." For ten years she bore no son to Thamala, but shortly after his decease was delivered of a son Wimala however had seized the kingdom and married the queen. For the better establishment of his position, he ordered that the child should be made away with. The mother was forced to pretend compliance, but she would not let her son be killed and he was thrown by night among a herd of buffaloes belonging to a woman Mi Nan Galaing In the morning when she went to loose the cattle she found the child took compassion on him and brought him up herself When he was old enough she set him to tend the buffaloes, and as he wandered with them through the jungle he learnt the language of every living beast. He played fearlessly with tigers and other wild animals, and thus became endowed with more than ordinary subtlety and strength. By the time that he was thirteen years of age, Wimala his uncle had been driven to great extremities by the foreign incursions Lamba, a giant, seven cubits high, led the foreign army and there was no champion in Hanthawaddy to stand before him. Attha however had never been forgotten by his mother, and she had visited him secretly He heard of the king's distress and offered himself as guardian of his country. By a simple wile and a swift blow, he transfixed the giant with his spear and rid the country of the foreigners His parentage was then made known, he was reconciled to his uncle and on the death of Wimala succeeded to the throne.'

Maheintha was the sixth prince after Thamala He also is the centre of legends, and a rationalist interpretation suggests that in his time there was a revival of serpent worship In his reign also Hanthawaddy seems to have come into contact with Syriam.

Altogether there were seventeen generations and Punnarika and Teiktha Raza are the names given to the last two monarchs. Phayre has suggested that these represent two periods of struggle between Buddhism and Brahminism. This suggestion finds corroboration in the legend relating the final victory of Buddhism in the reign of Teiktha Raza

The legend of Bhadradevi bears internal evidence of authenticity and is at the same time, to a modern mind, one of the most attractive of these tales In the time of Teiktha Raza Buddhism had fallen into disrepute, the pagodas were in ruins, the figures of the Buddha overturned and buried in the earth or cast into the water. Bhadradevi, the daughter of a merchant, was one day bathing when she hit her foot against something that proved to be one of these golden images An old attendant had come with her to the bathing place, and in answer to her questions told her of the Budda and the Law She immediately decided to embrace it and risk all evil consequences. Her devotion was so manifest that news of it before long reached the king. He summoned her before him, and finding she was resolved in her contumacy ordered that she be thrown before the elephants These refused to tread on her, sohe again gave orders forher death, this time decreeing that she be cast into a furnace. The flames, by virtue of the

Buddha and her faith in Him, rose round her harmlessly. This marvel made the king send for her again to question her, and when she proclaimed the message of the Buddha disposed him to accept it. Then he re-established Buddhism and to show his gratitude raised the maiden to the throne. She was very beautiful.

Although the legend relates the final victory of Buddhism, it was with Teiktha Raza that the first dynasty came to an end. Their downfall is ascribed to his having been a follower of Devadat. It seems more probable that they were conquered by Anawrata on his expedition to Thatôn. The Chronicle relates that governors from Pagan were henceforth sent to administer the kingdom.

PART III.—The Empires of Pegu.

The three Empires of Hanthawaddy.

The date given by Phayre for the close of Teiktha Raza's reign is 781 A.D. But it appears that the reign of Penarika and Teiktha Raza represent a period of strife between Buddhist and Hindu influence which lasted till the conquest of Thatôn by Anawrata about 1050 A.D. Thenceforward governors were appointed from Pagan, the names of three of whom are given in the history of Syriam · but it is probable that only those three were singled out for mention who rebelled against the Burman rule. The last of these, Tarabya was successful, but he succumbed to Wareru, the Prince of Martaban, who ascended the throne in 1287. Here the early history of Hanthawaddy ends; such little knowledge as we possess has to be gathered from numerous sources and supplemented by conjecture; hence it has been necessary to consider it with some degree of fulness. For the later period we are on firmer ground; it is unnecessary to consider it in detail, and indeed the material is so ample that it would be impossible to do so. The province of Dala has always been a bone of contention between Burma and Hanthawaddy; any attack upon Pegu by water has first necessitated the conquest of Dala If the attack was made by land the invading army usually left the Irrawaddy near Hlaing and marched across the northern portion of the Insein district. Hence the country side is rich in monuments of Burmese history, walled cities and old forts and memories of battle. Dala and Syriam have given titles to innumerable princes, and their strongholds there have been the occasion of almost as numerous rebellions. Embassies to Ceylon have set out from Dala, and in later days this place

and Syriam have been the parts frequented by adventurers from foreign countries. It was at Syriam that the Barnabite fathers initiated missionary effort, and much of the hardest fighting in the first and second Burmese wars took place within the limits of Hanthawaddy district. All that can be attempted therefore is to sketch in outline a few of the salient features of the local history.

The first incident of more than local importance occurred during the Burman governorship. An embassy was sent from Ceylon about 1181 A.D., and as the result of a dispute arising out of this embassy Dala was invaded by the King of Ceylon [1]. There are the remains of an old monument at Letkaik which Forchhammer thought to commemorate this incident [2]. It is Dala also with which the next occurrence is connected. Narathihapadi, later known as Talokpyomin, was expelled from his kingdom at Pagan in 1284 and took refuge in Dala, of which Kyawswa, his son and subsequent successor, was governor at the time. This is still remembered in oral tradition. About the same time Tarabya, the Burman Governor of Pegu, threw off his allegiance to Burma and called Wareru, the Prince of Martaban, to his assistance He succeeded in expelling the Burmans after a series of engagements between Dala and Henzada [3]. He then went to overcome Wareru by treachery and having persuaded him to disperse his soldiery, made an attack upon him. Wareru discovered his design in time to frustrate it, and "calling the guardian spirits of earth and air to witness that he was innocent poured out water from a golden bowl in testimony against Tarabya.[4]" He mounted his elephant and wounding Tarabya took him prisoner. A few years later when Tarabya again made an attempt upon him he ordered his execution. In the days when they had formed an alliance each had espoused the other's daughter. Now that Tarabya was sentenced to death his wife, the daughter of the King, pleaded for him, but finding her father resolved to give Tarabya no further opportunity of showing his treachery she mingled her hair with that of her husband's so that both their heads might be cut off at the same time. Wareru was informed about her action, but he did not relent. "Cut the head off," he said, in effect "and see if she still cares to go about with their tresses intermingled"

After the capture of Tarabya Wareru removed the seat of

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[1] Phayre, page 50

[2] Settlement Report, 1881 See also Chapter XIV.

[3] Phayre, page 65 Razadirit, page 10, 11, History of Syriam.

[4] History of Syriam. Razadirit.

the kingdom to Martaban, and there is little of importance in the history of Hanthawaddy until the grandson of Wareru returned from Martaban in 1323 A.D. The first epoch of Talaing literature orginates with Wareru.[1]

The first Peguan Empire.

With a re-establishment of a dynasty at Pegu commences the history of the first Peguan Empire The reign of the first monarch Binya-U was occupied in overcoming the pretensions of the Shans of Martaban, but a succession of able rulers brought about between 1354 and 1551 A.D, the consolidation of Martaban, Hanthwaddy and Bassein into a single empire. The foundations were laid by Binya Nwe, the son of Binya-U. This prince was appointed by his father, ruler of Dagon, and when forced to defend himself against the machinations of his step-mother and half-brothers he fortified this town against his father. Binya-U died before open war had been declared, and Binya Nwe succeeded. On coming to the throne he adopted the title of Razadirit. The chronicles of his reign still survive in a volume of over three hundred pages The foundation of the Danok Pagoda is ascribed to him.[2] The town of Hlaing was founded by him as an out post against the inroads of Burmans while Tabu Myo in the same neighbourhood is evidence still surviving of the rebellion of his eldest son[3]. His civil administration was more enduring than his military power, he organised the "Thirty-two Provinces of Hanthawaddy," which remained the basis of the administration until the advent of the British[4].

His death however saw a temporary recrudescence of anarchy. One son, the Prince of Syriam, rebelled, another, the Prince of Dagon, followed his brother's example and the Burman army occupied Hlaing in preparation for the subjugation of the kingdom, while the outlying provinces including Dala, passed under their sway[5]. Damma Raza, the son of Razadirit, succeeded to the throne. His brothers, however, remained for a time in opposition, and it is in connection with the troubles of this time that there comes into prominence Shin Saw Bu, one of the greatest characters of Peguan History, who married six husbands, in succession became Princess of Dala, Queen of Burma, and in her old age by popular election Empress of Pegu. She was sister

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[1] Forchhammer Jardine Prize Essay.
[2] Razadirit.
[3] Chapter XIV. Phayre, page 74. British Burma Gazetteer, Article on Hlaing.
[4] Chapter IX, Pre-British Administration. Laurie.
[5] Phayre. Shwenmawdaw Thamaing, page 104.

to Binya Ran and Dhamma Raza, and when the former rebelled and fortified Dagon against his brother she was given in marriage to the King of Burma in return for his alliance; such was her charm of personality that he crowned her Queen Consort, [1] a position almost if not entirely without precedent in Burman annals. Before she became Empress of Pegu, however, there were five rulers in succession to Dhamma Raza and the ordinary accompaniment of war and rebellion in Hlaing, Syriam and Dala. [2] The reign of Binya Waru, 1426-30 A.D., was an exception. He eschewed warfare, perceiving the damage which had been brought upon his kingdom, and set himself to the suppression of crime with such effect that "even a cat was executed for the murder of a mouse." Shin Saw Bu came to the throne in 1457 A D (B.E , 815), but shortly afterwards took up her residence at Dagon where she built a palace, the ramparts of which are at present the bunkers on the golf course The actual work of Government devolved on Dhamma Zedi, who had been a monk, and who succeeded her in 1464 A D, (B E 822). He was like his predecessor of peaceful inclination and it is probable that many of the "Thirty-seven Pagodas of Angyi" [3] bear witness to the intercourse which existed with Ceylon during the reign of this prince. Shin Saw Ba had extended the glebe lands of the Shwe Dagon Pagoda so far as Danok, but he retrenched them considerably, compensating however for the restriction in area by valuable gifts of gold and gems.[4]

The Burman power had now declined beneath the Shan usurpers and the last Peguan monarchs were therefore enabled to carry further the consolidation inaugurated by Razadirit But the local history of Hanthawaddy becomes of less importance, when the Burmans cease to make their advance by way of Hlaing and Dala The rising dynasty of Toungoo is from henceforth the storm-centre of the annals and the jungles of Hanthawaddy form a refuge for exiled princes fighting for lost causes. During the reign of Binya Ran there was still peace but the succession of Takarut Bi, his son, a boy of fifteen, who gave up his time to hunting and other light amusements, was the signal for the onset of Tabin Shweti and in 1540 A.D , the first Peguan Empire was brought to an end by the defeat of Takarut Bi.[5] The

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[1] Shwehmawdaw Thamaing, page 118 Phayre, page 82.
[2] Shwehmawdaw Thamaing, page 112.
[3] See Chapter XIV.
[4] History of Syriam. Shwehmawdaw Thamaing
[5] Shwehmawdaw Thamaing, page 126.

second epoch of Talaing literature extends from the reign of Dhamma Zedi to the fall of the empire.

The Second Peguan Empire.

With the accession of Tabin Shweti begins the second Peguan Empire under the Toungoo dynasty. This endured for two hundred years, a rather shorter period than the empire which it replaced. So far as Hanthawaddy is concerned it is with commerce rather than with war that this period is connected. But the former names remain. Dala and Syriam are no longer theatres of war but busy markets where merchants congregate. We hear of Dala which is a "very faire town and hath a faire port into the sea, from whence go many ships to Malacca, Mecca and many other places. It is a very fruitful country." Just beside Dala is "Cirion, which is a good town and hath a faire porte into the sea, whither come many ships from Mecca, Malacca, Sumatra and from divers other places. And there the ships staie and discharge, and send up their goods in Paroes to Pegu."[1]

There are still wars, however, but they are rather rebellions fomented by the Portuguese against the sovereign power than contests between equal princes. The defeated subjects are forced to turn to the Portuguese for help. "Valiant and faithful commander," commences one address to the Portuguese leader by a Talaing prince who has incurred defeat, "through the grace of the King of the other end of the world, the strong and mighty Lion, dreadfully roaring with a crown of majesty in the House of the Sun, I, the unhappy Saw Binya, heretofore a prince, but now no longer so, finding myself besieged in this wretched and unfortunate city, do give thee to understand by the words pronounced out of my mouth, with an assurance no less faithful than true, that I now render myself the vassal of the great king of Portugal, sovereign lord of me and my children, with an acknowledgment of homage and such tribute as he shall at his pleasure impose upon me."[2] This two hundred years is divided into three periods. From 1340 until 1599 Burma is yet independent of Pegu; then with the reign of Nyaing Yan Min it becomes subordinate thereto and the Shan dynasty is driven out. With the conquest of Burma the hold of the princes is loosened over the south of the country, and the Portuguese are enabled to establish themselves in the person of de Brito, "Nga Zinga" as the Burmans still remember him, as master of the lower province, including Toungoo which they ruled from Syriam. The Burmans and Peguans

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[1] Hakluyt: Fitch's Voyage, page 299.

[2] Pinto, page 297.

drive them out and Nga Zinga is executed, but these foreign adventurers have proved themselves dangerous neighbours and to this in all probability may be assigned the removal of the headquarters of the kingdom from Pegu to Ava under Tha Lun Min in 1635. Henceforth until 1740 Ava remains the capital although Pegu is the more important member of the empire. During this period Syriam is the chief city of the southern province.[1] The writings of the early adventurers of these times are full of references to Hanthawaddy (Ansidei or Ansedea) and various places and passages therein, but it is impossible to trace them out in detail.

The Third Peguan Empire. The Barnabite Fathers.

The Third Peguan Empire was but a passing phase; it consisted of the temporary restoration of the local power of Pegu. It receives an added interest in being the occasion of the introduction of Christian missionary effort. It was impossible permanently to rule a rich and distant province from a remote and comparatively barbarous centre, and as the royal line grew weaker the Talaings found an opportunity for asserting themselves. Their attempts to cast off the Burman yoke succeeded in 1740 A D, and in 1751 they again subjugated the Burman Kingdom. The Barnabite fathers landed in Syriam in 1721 A.D, and after the restoration of a dynasty in Pegu in 1740 prospered to such an extent that in 1750 they were enabled to build a large brick church of which the ruins still exist[2] With the arrival of the Burmans however they were suspected of entering into correspondence with the French on behalf of the Talaings, and the Bishop was executed in 1756. The mission in Syriam ceased to exist immediately after the Bishop's death

PART IV.—MODERN HISTORY.

The Burman conquest.

A Toungoo dynasty had conquered Pegu and Toungoo had become absorbed in Pegu, a Peguan dynasty had conquered Ava, and in course of time Pegu had become absorbed in Ava. The uprising of the Talaings under Buddha Keti in 1740 had been the uprising of a nation, and when Alaung Paya took up the cause of Burma it was again a nation rising against a foreign power. Henceforth there was no middle course for Burman and Talaing but the long arbitrament of a national war In former records it is a matter call-

[1] See Chapter IX.

[2] History of Roman Catholic Mission, Bigandet,

ing for no remark that Burmans and Talaings were to be found fighting on either side but this ceases to be the case. The greater part of the fighting was carried on within the limits of what was afterwards Rangoon District, and the district of Hanthawaddy was the scene of some of the most notable achievements.[1] The investment of Dala was signalised by the Talaing leader floating through the Burman lines as a corpse, returning the next day with reinforcements to raise the seige. The siege of Syriam lasted more than a year and the place was only conquered in the end by a courageous stratagem. The Burman army was encamped at Bogyok; and to deceive the enemy a festival was held with drums and music. The sounds floating over to the Talaing city on the hill induced the leaders and watchmen to relax their vigilance. Under cover of the revelry a devoted band of thirteen warriors, the "Golden Company," made their way over the walls and flung open the gate to the Burman army. They rushed in through the Wetthataga, the gate where Nga Than Hlyin in olden days had killed the legendary boar, and put the inhabitants to the sword. After Pegu had been taken at the end of two months' siege the jungles in the Dawbon Township, north of Syriam, receiv d the royal fugitives.[2] The exploits of various heroes receive due acknowledgment in the chronicles and there is a pleasant picture of a Talaing leader, who had been taken as a prisoner after many valiant deeds, being received with honour by the Burman King. The Burmans seem to have used their victory with moderation and Alaung Paya took in marriage the daughter of the King and honourably entertained the monarch whom he deposed. But there were continual risings until the first British war in 1826 when the Talaing Governor of Syriam again made an attempt to recover the independence of his country. It is on record that in 1826 there had ceased to be any national antipathy in Pegu, the extermination and banishment of the leaders and the "judicious treatment of the conquered having long since removed any appearance of distinction between Burman and Peguan. No individual preferences were shown and all enjoy equal rights and privileges, and both are eligible to fill the highest posts under Government."[3] This however can hardly have been the case in view of the serious depopulation of the district of Hanthawaddy which took place during this period, and the repeated risings. It is more probable that

[1] History of Syriam.
[2] Alaung Paya Ayadaw bon
[3] Snodgrass, page 87.

there was to some extent a union against a common invader and that the differences between Burman and Peguan were temporarily set aside.

The Foreign Factories

The early arrivals from the west had been isolated adventurers, sometimes merchants such as di Conti, Cæsar Frederic and Fitch, sometimes little better than pirates such as de Suarez and de Brito. It appears that an English factory was the first to be established after the downfall of de Brito's tyranny, Syriam having been apparently one of the agencies of the East India Company formed in Indo-China in 1612. In 1631 the Dutch were established there. But a dispute occurred between the Talaing Governor and the Head Factory of the Dutch in the middle of the 17th century and all foreigners were ejected. The Dutch never returned, nor does it appear that the Burmans and Peguans were ever anxious for the return of either; "it was impossible that they should forget the conduct of Gonzales or de Brito, or should draw distinctions between Portuguese adventurers and British and French officers; subsequent events only proved how right they were."[1] In 1695 a British sailor died intestate and his property according to the custom of civilized countries[2] at the time escheated to the crown. This was made the pretext for obtaining the establishment of a factory and although permission was gained in 1698 nothing further was done and matters appear to have continued on a somewhat indefinite footing until 1740. At this time, there was a British factor in charge, a Mr. Smart, who attempted without success to keep in with both parties deceiving apparently both of them alike. On the final victory of the Talaings, the factory was burnt down and the agency had to be withdrawn. The missions which were also thereby put in peril were shortly re-established but the factories were never rebuilt there.

The invasion of Alaung Paya in 1755, however, gave a further opportunity of intrigue which was exercised by British and French alike. Although both parties had a foot in either camp, the British in the main supported the Burmans and the French the Talaings. In the event the Burman king magnanimously overlooking their duplicity granted the British permission to build a factory at Rangoon. Just afterwards however the British and French ships, including the vessel of which the captain had been treating with Alaung Paya, joined the Talaing boats in an

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[1] British Burma Gazetteer, Vol I, page 295.
[2] The leading case is quoted in the Sentimental Journey.

attack upon the Burmans. They were beaten off and the permission to establish a factory withdrawn. Other factories had also been permitted outside the limits of Hanthawaddy District, but the fortunes of these it is unnecessary to follow. From this time trade was conducted by isolated merchants and not by the recognition of factories.

PART V.

History of the district from 1754 to 1853.

Alaung Paya was really one Aungzaya, Myothugyi of a town near Ava who rose against the Talaings who had successfully rebelled in 1740, and their acting Governor of Ava fled to Rangoon, then called Dagon, where the Burmese massacred the Talaing garrison. Soon afterwards Aungzaya came down and made himself master of the delta of the Irrawaddy and declared himself king of Burma and Pegu assuming the title of "Alaung Paya" and fixing his capital at Ava. He finally captured the town of Pegu with its king and defeated his general Dalaban at Martaban in 1757. He was recalled from his victorious expedition to Manipur in 1758 by a fresh revolt of the Peguans who had recaptured Rangoon but before he himself arrived his generals had stamped out the rebellion. He died while on an expedition to Manipur in 1760.

His son the Sagaing Min, generally known as Nyaungdawgyi, ascended the throne after some disorder in 1761 with his capital at Sagaing but died in 1764 and was succeeded by his younger brother the Myehtumin and the "lord of the white elephant" who re-established the capital at Ava. In 1769 the French sent him an embassy which obtained permission to establish a factory but no advantage was taken of the offer and the French never again appear as traders in Burma till after the British annexation. In 1771, during an unsuccessful Talaing rebellion Rangoon again suffered a short siege. In 1776 the king visited Rangoon, removed the Talaing "htee" (topmost ornament) from the Shwe Dagon Pagoda and replaced it by one he had brought with him.

In 1776 he died and was succeeded by his son Singu Min who was dethroned in 1781 and succeeded by the son Naungdawgyi who reigned only eleven days being murdered by his uncle Bhodabura, or Mintayagyi, who seized the throne and moved the capital to Amarapura. He too had to put down a rebellion of the Peguans in his first year. During his reign which lasted till 1819 there was a good deal of friction with the British.

He was succeeded by his grandson Bagyidaw in whose reign further outrages were committed on British subjects and in 1824 an invasion made into Cachar, a state then under British protection. War at last broke out between the British and Burmese and a British force under Sir A. Campbell landed at Rangoon in May of that year and besieged it and stormed and destroyed a stockade at Kemmendine (now part of Rangoon Town district). Fighting continued at and near Rangoon for some time but on an expedition being sent Syriam was found to be deserted by the Burmans. A truce followed but on the resumption of hostilities two strong stockades at Kemmendine were stormed and taken by the British who, however, suffered disease and the want of fresh food and seemed to have found Rangoon, during the rains at least, very unhealthy. Meanwhile the Burmese had re-entered Syriam and were driven out by a detatchment. Pegu and Martaban were taken without difficulty by the British but a detachment suffered a severe defeat at Kyaikkalo, on the Ridge near Sangyiwa in Insein district in October. This, however, was retrieved, and about the same time the Burmese were driven from their stockades at Tantabin on the Hlaing River in the Insein district. In the beginning of December the chief Burman army under their famous general Bandoola arrived at Rangoon and invested the British lines but they were defeated, their last fort, at Dalla, captured and a strong body of them driven out of their intrenchments at Kokine, now in Rangoon Town district. Finally after driving out the Burmans who had re-occupied Syriam the British army proceeded up the river to attack Donabyu and the Hanthawaddy district ceased to be a theatre of operations in this the first Burmese War.

On the evacuation of the British troops however the Peguans, who had been freed from the Burmans during their occupation, made another attempt to recover their independence and rose under Maung Sat, the Governor of Syriam, and attacked Rangoon, but were defeated.

In 1831 the king became insane and the Government fell into the hands of his brother-in-law, Minthagyi formerly a fishmonger, but in 1837 the king's brother, the Tharrawaddy Prince seized the throne and established his capital at Amarapura. In 1841 he visited Rangoon and repaired the Shwe Dagon Pagoda and cast a bell for it. Soon afterwards he became insane and finally died in 1846 and was succeeded by his son the Pagan Prince. In that year the Governor of Rangoon was one Maung Ut who

practised extortion and intimidation on the British traders in Rangoon. Redress was refused and in 1852 the second Burmese War broke out. Rangoon was occupied and the Shwe Dagon Pagoda Hill captured with a rush. The inhabitants of the neighbourhood proved friendly and brought in provisions for sale and in consequence of precautions taken by the Viceroy, Lord Dalhousie, the health of the troops was very much better than in the war of 1824. Martaban was quickly taken and Bassein and Pegu fell soon afterwards but the last was handed over to the Talaings to hold. The Burmans reoccupied it, however, and were not dislodged without considerable difficulty. The Province of Pegu was then formally annexed by the British. It still remained to drive out the remains of the Burman troops but these were suddenly recalled to the capital. A rebellion had broken out and the Mindôn Prince deposed the king, the Pagan Prince, and made himself master of what was left of the kingdom in 1853.

The British had then only the task of putting down the bands of robbers which infested the country. Some account of these is given in Chapter IX. The history of Hanthawaddy subsequent to its occupation by the British is described in the same chapter.

PART VI.—ARCHÆOLOGY.

The archæology of Insein district has never been studied but casual observation reveals two main lines of enquiry each of which would amply repay research. There is the problem of the laterite ruins and the problem of the walled cities. Nothing has been effected yet, and scarcely anything attempted, with regard to their solution.

The pagoda at Kyaikkalo is of laterite faced with brick and octagonal in shape [1]. Connected in legend with it are the pagodas known as Kyaikkasan, Thadugan and Kyaukwaing, which in their present form, are built of brick [2]. These pagodas and other laterite ruins are included in a series of similar remains found between Pegu, Syriam and Thatôn[3]. Their distribution corresponds

[1] British Burma Gazetteer.
[2] Settlement Report, 1883.
[3] "Objects of Interest", 1892.

roughly with that of the Orissa colonists but they are all of Buddhist origin so far as indentification is possible at present, traditions relating to them have been forgotten or else referring to a period antecedent to the arrival of the Talaings. Fragments of sculpture have been definitely connected with Orissa [1]. The Talaings so far as can be ascertained have always built in brick. It is difficult to resist the provisional conclusion that these pagodas and other buildings were built by the Orissan colonists at some time between 500 B. C. and 500 A. D. Remains still indicate or have indicated within recent years the existence of walled cities of the Burmese regime at Hlaing, Tabu, Hmawbi and Mingaladon. In the sixties Hlaing was specifically excluded from the area to be granted as waste land,[2] but material remains have been converted into ballast for the railway and the demand for rice-land has accelerated the process of natural decay [3]

CHAPTER III

THE PEOPLE.

Population Growth.

The growth of the population, and its distribution with regard to area and race afford an useful index to the course of economic change, adequate treatment is beyond the limits of a Gazetteer, but even a cursory survey is full of interest and may be of considerable utility. The annual census which was a feature of early Anglo-Burman administration enables us to trace with some degree of accuracy the yearly increase prior to the first regular census held in 1872. The relation traceable between population and cultivated area and the comparatively stationary state of the population from 1857 to 1860 support the estimate that under normal conditions shortly before the annexation there were some 200,000 people within the area subsequently constituted as Rangoon district. The estimate of 400,000 made by the Commissioner in 1855[4] is probably much above the mark

1855-1872

The first return on record is that for 1855 when the population of Rangoon district was returned as 175,185. In

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[1] British Burma Gazetteer, Vol II, page 716-717.
[2] Pegu Manual, 1865.
[3] Settlement Report 1884, p. 71.
[4] British Burma Gazetteer, Vol. II, page 553.

1860 separate figures are available for Rangoon Town; in this year there were 61,570 people residing within the town and 213,272 in the remainder of the District. A check by European officials of the return for Rangoon Town justified in the opinion of the Deputy Commissioner that the figures had "attained as great a degree of correctness as is possible". But in 1865 a similar check in selected circles of the District showed a deficiency in the thugyis, returns of 27 per cent.

The figures of these early years are of sufficient interest to justify reproduction at length.

Year.	Population in Rangoon Town	In the rest of Rangoon District.	Total.
1855	38,055	137,130	175,185
1856	...	..	178,889
1857	...	..	201,633
1858	...	...	195,759
1859 . ..	..	..	221 829
1860 .. .	61,570	213,272	274,842
1861 .. .	...	..	283,714
1862	61,138	236,121	297,259
1863 .. .	63,256	249,999	313,255
1864	66,577	246,149	312,726
1865	69,866	247,523	317,389
1866	71,186	280,231	351,417
1867 ..	72,675	285,400	358,075
1868	96,942	264,495	361,437
1869	93,163	257,149	350,312
1870	100,000	273,078	373,078
1871	77,777	310,035	387,812
1872	80,096	348,236	428,332

The first Census, 1872.

The first regular census was held in 1872. The figures differ from those given in the annual returns as shown below.—

	Rangoon Town.	Rangoon District.
Annual Return (1872) ..	80,096	348,236
Census	98,745	332,324

In 1875 the town of Rangoon became a separate administrative unit and the townships of Pyapôn, Yandoon and Thôngwa were allotted to the newly constructed district of Thôngwa. The census of 1872 does not give details regarding areas smaller than the district.

The next census was held in 1881. The district was known as Hanthawaddy after the separation of Rangoon Town in 1875: the Pyapôn, Yandoon and Thôngwa townships, which had been contained within the district at the previous census were now excluded, but it still comprised two townships subsequently allotted to Pegu District. The population was returned as 427,720 constituting 11·5 per cent. of the provincial total In this census the figures are available for each circle and it is therefore possible to estimate the population in those areas then or subsequently transferred to other districts. In 1881 the population of the three townships which had been transferred to Thôngwa in 1875 amounted to 153,237. The total population included within the limits of the original district excluding Bawni, Kawbah and Thônzè circles* is shown below —

The second Census 1881.

	Population in 1881
Hanthawaddy	427,720
Rangoon Town .. .	134,170
Pyapôn, Yandoon and Thôngwa townships.	153,237
Total	715,131

The population of the part assigned to Pegu in 1883 amounted in 1881 to 128,625, so that that of the Hanthawaddy district as it existed just before the partition of 1912 was about 300,000 in 1881. That of the present Insein district was about 144,000 as may be seen by adding the figures for the townships of Hlaing, Hmawbi and Paunglin in the Census Report for that year.

The Censuses of 1891, 1901 and 1911.

Censuses were held in 1891, 1901 and 1911 but in 1883 the Paunglin and Hlègu townships were removed from Hanthawaddy and given to Pegu district and in 1895 Kyauktan subdivision was given back to Hantnawaddy and Rangoon Town was enlarged at the expense of Hanthawaddy. Sufficiently accurate figures are obtainable from

* *See page 1.*

the Census Reports of 1891, 1901 and 1911 to show the changes in population of Hanthawaddy district as it existed just before the partition of 1912 and of the present Insein district:—

	1881	1891	1901	1911
Hanthawaddy district.	296,026	395,131	474,262	539,109
Insein district ..	144,000 (about)	179,089	226,889	265,245

There has thus been a great and steady increase due to a large extent no doubt to the extension of cultivation The rate of increase has however become slower. There is very little waste land left now and the population is not therefore likely to increase much more unless a new industry springs up.

Distribution by age. Without further analysis the rapid rate of increase indicates but fails to elucidate the artificial nature of social conditions in Hanthawaddy as it existed just before the partition of 1912, the statistics showing the distribution of the inhabitants according to their age afford more definite information. Normally there should be a close correspondence between the male and female population at all ages. In Hanthawaddy this is not the case In 1872 there is already noticeable a preponderance of males between the ages 20 and 40; this however is discounted by the existence of a slight excess in every age-period. It is significant however that already within three years of the opening of the Suez Canal (1869), the town of Rangoon for which, although still contained in the Hanthawaddy district, separate figures were recorded, had already been swept into the vortex of economic change. Ten years later, as shown in Chapter IV, the agricultural revolution was complete in all essentials and by that time the distribution of the inhabitants of the district over age periods differed radically from that observable in 1872 and closely resembled that obtaining in 1911. These changes are illustrated in the subjoined table, but the census figures receive additional significance when it is noticed that there is no longer a general preponderance of males in every period

of life but that between the ages of 0 and 5 and 5 and 10 females are in excess.

Population between 20 and 40 years of age

—		Males	Females.	Excess of males
1872 Town	...	30,319	12,632	17,687
1872 District	..	53,455	48,790	4,665
1881 District		87,735	52,830	34,905
1891 District	..	50,522	36,374	14,148*
1901 District	...	99,842	68,808	31 034
1911 District		109,625	75,888	33,737

The district figures in this table are in all cases exclusive of Rangoon Town

Races, Tribes and Castes.

The natives proper to Insein district are Talaings, Karens and Yabeins. Long before the British occupation many Burmans and Shans had been established there as colonists or voluntarily taken up their residence. From the middle of the sixteenth century the fame of Syriam—now in the neighbouring district of the same name—had attracted merchants of all nations but these rarely penetrated into the interior and left little mark on the population of the locality. In the neighbourhood of Syriam itself however Christians of mixed blood were found by the early missionaries at the beginning of the eighteenth century. These were presumably descended from followers of De Brito, "Nga Zin Ga" of the Burmans who had established a principality in Syriam in 1600† Even to this day there are still Mahomedan colonies in Syriam and the surrounding villages who derive from the same period. The establishment of Rangoon attracted more adventurers, European, Jewish, Armenian and Mahomedan. As a result also of the Burman occupation the Talaing population decreased; in 1752, 1791, 1814 and 1824 there were Talaing rebellions followed by massacre

* These figures are for the ages 20—39; the decrease is also due to changes of boundary, these figures being for the Hanthawaddy district as it existed not in 1891 but immediately after the partition of 1883.

† See Chapter II

and emigration, the Burman population increasing at the same time. It was at this period probably that some of the Shan colonies were settled. The Shans of the Yuu circle of Syriam allege that they were brought there from Siam by Alaung Paya. Even now they refuse to accord him his royal title and talk of him as Maung Aungzaya.

Since the British occupation by far the largest increase is due to immigrants from Upper Burma. More noticeable however in some respects is the influx of Chinese and Hindus, the former mostly from the Straits and the latter from Madras. There had also been a stimulus to Shan immigration special measures to attract them being taken in the days of the Company and when the administration was first taken over by the Crown.

Language. Except the Talaings, the original inhabitants, each race retains to some extent its mother tongue Burmese however is the "lingua franca" all over the district and it is only where the Madrassi population is most closely settled that there is serious difficulty in finding people who understand the language of the country. This was not the case in Burmese times when each community kept to itself maintaining its own speech and customs; Shans and Karens for the most part were cultivators on the uplands as the former are still, while the Talaings employed themselves with fishing and cultivation in the plains. It was the Burman policy however to extirpate the speech and national traditions of the Talaings. The uniformity of British rule without respect of persons has completed the process and now even the oldest Talaings can remember nothing of their language but the abusive terms with which their grand-mothers corrected them when children.

Distribution of Races. There is little information concerning the present-day distribution of the indigenous races, nor is there great interest in attempting to follow it in detail. The census for 1901 gives but little help in this respect as the indigenes are there distributed according to the language ordinarily spoken, and the majority of the Shans and Karens are rapidly forgetting, as the Talaings have forgotten, their native speech. Nowa-days the Shans are found almost entirely on the Ridge, but the Karens seem to be able to adapt themselves to any locality and are found everywhere. There are a very few Chins. About the year 1904 there was a village of them quite near Taikkyi and the women had their faces tattooed. The total population in 1901 of the townships now in the Insein district with the number of ordinary people

speaking English, Burmese, Karen or Shan and the number of Mussalmans and Hindus is shown in the following table[1] :—

—	Total.	English.	Burmese	Karen.	Shan.	Mussalman.	Hindu
Taikkyi ..	73,263	10	56,202	11,970	2,959	1,115	1 045
Insein ..	103,984	479	80,846	7,195	2,638	2,321	8,484
Hlegu ...	40,642	16	39 329	7 279	378	852	1,693

The influx of Indian traders and still more of Indian labour is so closely interwoven with the economic change that it is essential to trace it in some little detail. In the early sixties there are frequent references to immigration but the new arrivals are from Upper Burma and in 1868 the Gazetteer of Rangoon district makes no mention of immigrants from India. In 1869 there is however an analysis of the population of the Rangoon district which is confirmed by the census three years later as approximately accurate. For that and succeeding years the alien population exclusive of Indian Christians is shown in the following table but it must be remembered that the district at that time included Rangoon town —

Indians.

Year	Total Population.	Hindus.	Mahomedans	Total of Hindu and Mahomedan
1869	356,317	9,040	4,425	13,465
1870 ...	373,078	7,164	6,775	13,039
1871 .	387,812	4,814	7,578	12,392
1872 ..	428,332	4,520	9,279	13,799
1873 ..	410 413	4,061	11,819	15,880
1874 ..	356,861	5,737	11,671	17,408

The decrease in Hindus and the increase in Mahomedans are noticeable ; it is possible that this represents the actual course of affairs, the influx of Mahomedan traders preced-

[1] The Tantabin Township had not in 1901 been yet formed out of the other two.

ing the importation of Madrassi coolies as labourers in the rice mills. But the total of both religions remains so constant that it is not easy to refrain from the suspicion that *thugyi's* in early days exercised no meticulous care in distinguishing between various brands of foreigners. The rise of 25 per cent. in the number of Hindus between 1873 and 1874 closely following, as it does, upon a large increase in the number of rice mills, indicates perhaps that the slur on the *thugyi's* is undeserved. Since 1872 there has been a large increase in the number of foreigners as is shown by the following table which is very nearly accurate. There were 518 Mahomedans and 934 Hindus in the old Hanthawaddy district in 1872:—

Population of the present Insein district in—

Year.	Total.	Male.	Female.	Buddhist.	Animists.	Mussalmans.	Hindus.	Christians.	Others.
1881	143,668	77,823	65,845	134,206	419	1,237	8,114	4,651	9
1891	179,069	95,183	83,907	164,040	722	2,429	6,527	5,871	...
1901	226,889	120,908	105,981	201,016	1,493	1,289	11,202	9,400	489
1911	265,245	141,345	12	233,910	2,866	6,071	18,910	12,839	513

The population of 1911 is shown distributed by Townships in Table II, Volume B, and by village tracts in Part III of the same volume. The statistics of Part III show that the Hindus out-number the Mahomedans except in Taikkyi township. The latter are usually of better social standing than the former and can often afford to bring over women from India to live with them.

Immigration and Emigration.

Prior to the advent of the British the population for many years had been rapidly diminishing; since the conquest by Alaung Paya in 1756 there had been four Talaing rebellions[1] besides smaller risings and wholesale emigration had followed on the unsuccess of each attempt. There were however Burman immigrants and a few Shans who settled in the district. With the British occupation emigration gave place to immigration. The movement was comparatively slow at first and the exemption from taxation held out as an inducement largely ineffective. Crowds of Burmans flocked over for the harvest but they did not settle.

[1] *See* paragraph above on races, tribes and castes.

In the sixties it is reported that no great increase can be looked for. But the increase in capitation tax and the returns of population can scarcely have been wholly due to increasing accuracy, and from these may be gathered that people from all parts of Burma and later on from India, were gathering in greater numbers year by year in the Hanthawaddy district in search of gain. At the census of 1901 there were representatives within the district of people from nine places beyond the limits of Asia outside India, from sixteen major divisions of India, and from all the districts in Burma except Karenni. The Burman districts most largely represented with the approximate number of immigrants from each are shown below for both 1901 and 1911.

Persons born in other districts living in Hanthawaddy in 1901 and 1911 :—

District.	1901.	1911.
Tharrawaddy	9,889	7,037
Pegu	...	2,786
Prome	...	4,285
Ma-ubin	...	3,058
Mandalay	9,038	4,397
Shwebo . ..	9,024	5,399
Myingyan . .	6,782	3,5[illegible]0
Lower Chindwin	5,705	3,377
Pakôkku .	[illegible],276	3,416
Magwe	4,563	2,00[illegible]
Minbu	4,526	2,804
Sagaing	3,957	2,766
Meiktila	3,472	[illegible],906
Shan States	3,182	2,793

The falling off of immigration into the district from other parts of Burma since the begenning of the century is remarkable.

The table given on page 46 shows that the immigration of Hindus and Mahomedans goes on steadily and rapidly. The proportion of Mahomedans and Hindus combined to Burmans was roughly $\frac{1}{30}, \frac{1}{27}, \frac{1}{13}$ and $\frac{1}{9}$ in the years 1881, 1891, 1901 and 1911 respectively.

The Superintendent, Census Operations, 1911, divides immigration into casual, temporary, periodical, semi-permanent and permanent. In the district there is a very great deal of the first two kinds because its communications are very good and it is the scene of frequent large works such as railways, reservoirs, pipe-lines, etc., which rise close to a large city like Rangoon. Periodic immigration is noticeable in the district only at harvest time as there are no important seasonal industries in Insein or Rangoon except the rice milling industry. It is true milling goes on for most of the year except in October, November and December but it is most active in January, February, March and April, and in these months boats and barges, usually manned by Indians are continually moving up and down the creeks of the district

Formerly many men from Upper Burma used to come and reap the harvest in the district area making encampments in the fields of mat huts and carts, but this immigration has largely ceased and roving bands of Indian coolies have taken their place and reap very much of the rice crop of the district. They also repair the embankments between the rice fields and small protective works after harvest is over.

The remarks of the Superintendent of Census Operations in paragraph 71, Chapter III of the Census Report of 1911 regarding the change of the immigration of Indian coolies from a seasonal to a semi-permanent nature is true of the district and is due to "the tendency to the utilisation of Indian cooly labour in agricultural operations in Lower Burma. Coolies who at one time came to Rangoon for the rice milling season and then returned to their country now manage to find work in the districts of Burma near Rangoon for the greater portion of the year. Organised in regular bands they travel from village to village performing in succession the operations of ploughing, transplanting and reaping for the larger landholders, then returning to Rangoon in time for the milling season from January to May. It is possible by this method to keep in almost constant occupation for the whole year."

There is little permanent immigration now into the dis-

trict as there is little or no culturable land left and no new industry has sprung up since last settlement. The growth and manufacture of rubber is as yet in its infancy. Few persons come into it from other districts[1] to settle but there is a tendency for well-to-do persons of all races to leave Rangoon and reside in the district near Insein or indeed anywhere along the Ridge which is full of the most delightful spots to build a house and garden. Indians and Chinese too immigrate from Rangoon and set up shops or carry on business in the district. As the Superintendent, Census Operations, remarks "The Indian and Chinese immigrant has entered in response to the demand for labour in the transport, distributive and special urban industries which the Burmans and other indigenous races for the time being failed to supply."

The chief migration from one part of Burma to another is that from the "Central Basin", including most of Upper Burma, to the "Deltaic Plains" in which the district lies. This has lately declined and the Superintendent of Census Operations gives three reasons, *viz*, "that the easily culturable land in the deltaic districts has all been appropriated, that capital for financing further operations is more difficult to procure, and that there are openings to be found in the oil industry and in the irrigated areas of the Central Basin which are comparable with those now afforded by emigration southwards. The extensive migration of the latter part of nineteenth century has ceased". These remarks are true as regards the district. There is no good waste land left and chetties have been less willing of late years to take land as security for loans and have been restricting their operations. They are now very careful to whom they lend.

Indian immigration into Burma has also decreased owing to an increased demand for labour in the Federated Malay States and a less demand in Burma. This tendency has been measured by the surplus of immigration over emigration. The figures given on page 46, however, seem to show that there is no slackening in the increase of the Indian population in the Insein district.

The Superintendent of Census Operations estimates that the total number of Chinese in Burma in 1911 who had immigrated into Burma was about 62,000 but the figures for the district area are not available There must have been a considerable immigration into the district as Chinese are found everywhere in it. They sell liquor, work ferries

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[1] *See* page 47.

and sampans, keep shops and cultivate market gardens and many of the richer of them have rubber plantations and residential estates on the Ridge.

There is little emigration of Burmese from the district to other countries. A certain number of the country people are attracted into Rangoon by the hope of larger earnings in spite of the greater cost of living. Cultivators finding land in the district scarce or impoverished go to districts like Pegu and Pyapôn where waste land is still available. Subsequent to the annexation there can have been little emigration after the country had once ceased to be disturbed. Of recent years however it has again become a noticeable feature as cultivators have been forced to other districts by the pressure on the land. In 1901 there were 16,663 residents of Thôngwa and 9,552 of Pegu district who had been born in the Hanthawaddy district.

The persons who had been born in Hanthawaddy district and were enumerated in 1901 and 1911 in some of the other districts are shown below :—

<table>
<tr><th>Province.</th><th>District.</th><th>1901.</th><th>1911.</th></tr>
<tr><td rowspan="4">Lower Burma ...</td><td>Rangoon City</td><td>3,224</td><td>4,266</td></tr>
<tr><td>Pegu ...</td><td>9,552</td><td>8,503</td></tr>
<tr><td>Ma-ubin ...</td><td rowspan="2">16,663</td><td>1,526</td></tr>
<tr><td>Pyapôn ...</td><td>12,171</td></tr>
<tr><td rowspan="2">Upper Burma ...</td><td>Shwebo ..</td><td>84</td><td>521</td></tr>
<tr><td>Myingyan ...</td><td>18</td><td>455</td></tr>
</table>

The emigration to other districts is unimportant It is clear that the large emigration into Thôngwa (now the Ma-ubin and Pyapôn districts) has been maintained.

Towns and villages.

Before the annexation in 1853 the Insein district was mostly jungle. Now it consists of forest on the hills which is carefully conserved, of gardens and residences on the Ridge, and of valleys and plains where almost every acre of culturable land is made to produce a crop of some sort. So far as one can judge it has reached the highest stage of development. The growth of Rangoon as a seaport, the rise of the rice industry, the opening of the Rangoon-Prome Railway in 1877 and the Rangoon-Pegu Railway in Feb-

ruary 1884 and the innumerable benefits derived from a firmly established and progressive Government are the chief causes. The people now live to a considerable extent in towns (see Chapter XIV) and it may be said that very few live in country villages who are not employed in the cultivation of the adjacent fields or in subsidiary occupations connected with it. The Burman likes to live in a town because it is more socially lively and he can obtain education for his children. The following table shows the growth of the population in some of the principal villages and towns in the district area, but owing to changes in village tracts in the last 30 years some of the figures of the early years may not be strictly accurate :—

Village tract or town.	1881.	1891.	1901.	1911.
Okkan .	783	1,276	1,410	1,251
Paukkon ...	...	..	1,2[illegible]0	2,954
Taikkyi ..	90	1,288	1,122	2,768
Myaungtanga ...	836	994	1375	1,617
Hmawbi ..	1,283	1,460	2,062	2,581
Thingangyun (Bala circle).	...	1,253	1,227	1,278
Togyaunggyi ...	1,3[illegible]3	1,181	1,490	1,518
Theinchaung .	1,515	2,240	1,93[illegible]	2,518
Tantabin ...	[illegible]91	1,374	1,3[illegible]7	1,959
Insein .	797	3,755	5,5[illegible]5	13,992
Hlègu ...	275	2,489	..	3,239
Dabein ..	2,587	2,996	...	3,866
Paunggyi ...	340	1,701		1,933

It illustrates one or two general principles. Thus Okkan situated about 2 miles from the Railway is being deserted to some extent for the nearest Railway town of Paukkon (Okkan railway station). Taikkyi and Hmawbi are growing railway towns. Myaungtanga, Thingangyun, Togyaunggyi and Theinchaung are old villages among rice

lands far from the railway and do not increase much. Tantabin has increased greatly since it became a township headquarters and Insein has lately become a popular residential town and moreover has been made a district headquarters. It owes its large population however mostly to the presence of railway works.

The Government bazaars are shown in Volume B, Part I. Rangoon is the great central market and the shops there are largely patronised by the country people but these bazaars and the local shops described below supply most of their wants.

The villages of the district are to be found on the banks of the rivers, streams and creeks, on the railway line—Paukkon is an excellent example of a town which owes its increase to the railway—at the foot of the slopes of the Ridge, and dotted thickly over the plains, generally on patches of ground higher than that surrounding it, though the difference in level is often hardly perceptible. They are grouped for administrative purposes in village-tracts under the charge of headmen. Many of them are very small and several contain less than twenty houses. There is a tendency for gardeners too to live in their gardens as unless they constantly watch them they get no fruit. Indians often live in the rice-fields in groups of two or three houses. If a man's land is very far from his village his field hut is apt to become a permanent residence. The villages vary enormously in age and derive their names from their founder or from some neighbouring natural feature or some legend connected with their foundation.

Houses.

There is a great variation in the type of dwelling house. The best are substantial, cool and airy buildings built of brick with heavy teak doors and iron-barred windows but they are few and found only in towns and large villages and inhabited usually by chetties, merchants or shopkeepers. Among people of moderate means the houses have almost always bamboo walling, the posts and sometimes the floor are made of wood, and the roof of thatch of various kinds, *e.g.* "salu" near the forest reserves in the north-east of the district, "dhani" near the tidal creeks and elsewhere "thekke". There are a large number of wooden houses, however, especially in the towns and large villages and a fair number of these are roofed with corrugated iron. Shingle roofs are almost unknown but roofing of split bamboo is not uncommon. Not a few of the houses of the poorer classes are made wholely or in part from the sides o kerosene oil tins pieced together.

A mat or two and a few cooking pots still constitute nearly all the furniture of the household in most families but land owners and traders will in general possess a table, one or two chairs including one with leg-rests, at least one gaily coloured carpet and some antimacassars. Advertisements, cheap German prints, and the portraits given away with inexpensive cigarettes will usually be found stuck about any house where the owner has a taste for art. Portraits of royalty are often found on the walls.

Furniture.

The gardens are perhaps the most noticeable feature in the external social surroundings of the inhabitants of the district It is not anywhere that it is possible to make a garden, but there will be a few pot plants to show good will and even where the ground is under water during a large part of the year there may be a kerosene oil tin with a stunted rose plant hanging from the roof Under favourable circumstances the gardens are very beautiful and contain hibiscus, crotons, cannas, champac, etc. The large white roselle although grown mostly for culinary purposes is pleasant to look upon, and yellow flowering gourds disguise the nakedness of many of the poorer houses As shade trees there are the mango and the tamarind

Gardens.

The dress of the people resembles that in other parts of Lower Burma—a kilt (with or without plaid), jacket and a turban for a man; a skirt, jacket and long scarf for a woman—the only peculiarity being that there probably is even less homespun clothing than in districts less adjacent to Rangoon Already in 1880 weaving was practically confined to the Karens inhabiting the Ridge, now there are very few looms to be found in the district In the larger villages however there are dyers who print fresh patterns on old turbans and turn them out again apparently as good as new This indicates that more economy is exercised in clothing than would be gathered from a casual inspection of the crowd at some pagoda festival. Most of the clothing is made of cotton and bright in colour, manufactured in Europe and very cheap It may be bought in the Government bazaars or in village shops or from pedlars. The Indian dresses apparently much the same as elsewhere He readily takes to Burman attire, to some extent as regards head-dress, and more particularly as regards the kilt.

Dress.

The food of the people is good and plentiful and consists of rice, salt fish, preserved fish, vegetables and fruit with a little meat (beef, buffalo flesh, pork, goat-flesh, fowls) condensed milk, eggs and European luxuries such as biscuits and sardines.

Food and fuel.

The main article of food is naturally rice but probably most of the rice consumed is purchased. "*Bawyut*", "*midon*," and "*kamachi*" are the favourite varieties, for *ngasein* however, a grain much exported, there is the largest market and this is mostly grown. Certain localities are better suited for the varieties favoured by the Burman: and the milling of these is a separate industry mostly in the hands of Indian and Chinese merchants. The richer therefore usually purchase their rice, but a good deal of the rice consumed by agriculturists is ground at home by means of hand mills and the large pounder worked with the foot. The fisheries of Insein district are important but much of the *ngapi* and fish consumed come from other districts. Most of the vegetable and fruit are grown in the district, beef, pork, fowls and eggs are everywhere procurable and most of the common tinned provisions can be bought at the village shops.

Fuel can be cut in the jungle in most parts of the district though long journeys must often be made to get it. In the lower valleys of the Hlaing, Panhlaing and Pazundaung rivers it is bought largely from the neighbourhood of Bogale in Ma-ubin district in cargo boats and sampans and is a considerable item of household expenditure. One hundred billets of "*tein*" or "*kanizo*" a cubit in length and about 8 in diameter will cost anything from Rs 10 to Rs. 20 in a village in these valleys.

Domestic economy. Prices.

It is difficult to trace the course of prices either before or subsequent to British occupation; but there is little doubt that food and household necessaries used to be plentiful and almost free and now they are in some ways more plentiful and certainly more varied but have to be bought. Rice was grown almost entirely for home consumption and was very cheap, now there is a huge export trade in unhusked rice and the prices of both husked and unhusked rice are high and subject to great fluctuations. Vegetables, fruits, firewood, thatch, etc., could then be obtained for nothing in the jungle but now they must be bought.

Hanthawaddy district is peculiarly fortunate in possessing among its records a statement of prices between 1868 and 1881 prepared by Captain Parrott. This bears internal evidence of accuracy, although the source from which it was obtained is not quite clear. The following abstract shows the state of prices for the first year on record, and at subsequent decennial intervals from 1850, and at the present

day. When two figures are given they represent the lowest and the highest prices current.

Article.	Quantity	1848	1850.	1860.	1870	1880.	1911 (Average price.)
1	2	3	4	5	6	7	8
	Baskets	Rs. A. P.	Rs. A.	Rs. A.	Rs. A.	Rs. A.	Rs.
Unhusked rice	200	10 0 0 20 0 0	10 0 20 0	40 0 55 0	45 0 65 0	70 0 100 0	110
Husked rice	100	60 0 0 63 8 0	57 8 63 8	210 0 350 0	200 0 300 0	300 0 300 0	400
	Viss.						
Fish paste (ngapi gaung)...	100	6 4 0 7 8 0	7 8 10 0	20 0 30 0	30 0 40 0	30 0 60 0	45
							As
Salt	1	0 0 6 0 2 0	0 1 0 2	0 1 0 2	0 1 0 2	0 1 0 2	2
Sessamum oil	1	0 4 0 0 8 0	0 4 0 6	0 10 1 0	0 10 1 0	0 12 1 0	18
Fish (dried)	1	0 4 0 0 8 0	0 4 0 6	0 12 1 0	0 12 1 4	0 12 1 4	16
Fish (raw)	1	0 1 0 0 2 0	0 1 0 2	0 8 1 0	0 10 1 0	0 10 1 4	10
Chillies	1	0 1 0 0 2 0	0 2 0 4	0 6 0 12	0 4 0 10	0 6 0 9	10
Betel-leaf	1	0 1 0 0 2 0	0 1 0 4	0 6 0 8	0 6 0 8	0 6 0 13	18
Betel-nut ...	1	0 8 0 0 10 0	0 8 0 9	0 12 1 0	0 10 1 0	0 3 1 [illegible]	10
Tobacco (Burmese)	1	0 2 0 0 4 0	0 2 0 6	0 5 0 8	0 6 0 10	0 6 0 12	12
	Basket						
"Sè vo" (tobacco chopped stalk)	1	0 4 0 0 8 0	0 4 0 10	1 0 2 0	1 [illegible] 2 0	1 4 2 8	20
	Viss						
Jaggery ...	1	0 2 0 0 4 0	0 2 0 4	0 6 0 8	0 5 0 10	0 6 0 20	[illegible]
Earth-oil	1	0 1 0 0 2 0	0 1 0 2	0 6 0 [illegible]	0 [illegible] 0 [illegible]	0 6 0 7	2

A sudden rise in prices seems to have taken place about the time of the British annexation; and since then there has been an increase in the cost of most articles especially rice. This is the most important and so the cost of living has increased. Articles of dress have probably become cheaper and it is a matter of common knowledge that clothing imported from Great Britain, Germany and Japan has been ousting home products on account of its cheapness.

Cost of living.

Colonel Parrott made an estimate when settling the adjacent district of Syriam that the whole annual cost

of living (including food, dress, repairs to house, etc.), for 3 adults and 3 children would be nearly Rs. 300 and for 2 adults and 3 children nearly Rs. 250, or nearly Rs. 50 per head. This he considered a very liberal estimate Mr. McKerron in settling a large part of Insein district in 1899-1900 remarked that on Rs. 350 "a Burman cultivator's family can live in the height of comfort". The average cost of living per head was found at the settlement of 1910-12 to vary from Rs. 41 in the south of Taikkyi Township to Rs. 60 in Tantabin township near Rangoon There is now general complaint of the high price of unhusked rice. The Settlement Officer in 1910-12 unlike his predecessor in 1899-1900 [1] was not impressed by the high standard of living of the people in the townships of Insein, Taikkyi and Tantabin and thought the people were "generally speaking . . . rather poor". The Insein district is far from homogeneous however and conditions of life vary very greatly within it. The number of beggars seems to have increased and they are found at most of the railway stations. In Rangoon they have become a public nuisance.

Since it is mainly on account of cheapness that imported articles have displaced those of native manufacture it is possible that so far as the articles which are purchased now and also purchased in 1870 are concerned there has been a fall in the cost of living. This however is more than counterbalanced by the increase in the cost of rice. The fluctuations in the price of unhusked rice are given in the last paragraph of Chapter IV, and those of husked rice closely correspond to them Now-a-days (1913) Rs. 4 per basket is considered a fair price for husked rice and it often cannot be bought so cheap

Wages

A table of wages and hire is given in Volume B, Part I, and some more information is given in Chapter IV. Agricultural indebtedness is discussed in Chapter IV. Non-agriculturists also borrow much but no inquiry has ever been made into their financial position in Insein district. Borrowing and lending are universal. All occupations are carried on by means of credit and every one is willing to make a little money by lending out at interest.

Religious life.

The religious life and attitude of the Hanthawaddy Burman and Talaing differ little from that found elsewhere, but where there is a difference it does not always seem like an improvement. There are very few Lower Burmans in the monasteries and most of the monks have been attracted

[1] Settlement Report, paragraph 19.

from Upper Burma by the prospect of good fare. Together with the Talaing language the Burmans destroyed the religious life of the Talaings so far as it was essentially Talaing. At the annexation of Pegu the latter seems to have struck observers as more superstitious than the Burman, and the suppression of Talaing monasteries may in part account for this. But the Burman immigrant, careless of local deities, like all adventurers, would tend towards free thinking. The children of the better classes have been sent to receive their education in Rangoon, and many of those not so well off are taught in lay schools rather than in the monasteries. In the latter they may learn to acquire merit, but in the former they have more chance of learning to make money. The monks, being new-comers from distant parts, have had less influence and have also lost status from rendering less useful service, while the fluctuating population has been dominated by the conditions of material progress; these circumstances have all combined against the stability of the old religious life.

There are many Christian colonies, mostly Roman Catholic, both among Madrasis and Karens. The first Roman Catholic mission in the country was that established by the Barnabites at Syriam in 1721. After enduring much difficulty and many dangers it came to an end in 1756 when the Bishop (Father Nerini) was executed by Alaung Paya on the ground that he had called the French to give help to the Talaings.

When Rangoon became the chief town of Lower Burma a Roman Catholic Mission was established there and missionary effort gradually extended over the whole of Burma. On the annexation of Pegu in 1853 the Catholic mission entered on a more prosperous career and flourished greatly under the care of the venerable Bishop Bigandet (1856-94) and his successor Bishop Cardot. At present (1913) there are about 1,178 Roman Catholics in the district (excluding Hlègu township), of whom about 200 are in the Tantabin township, 500 in Insein town and the rest in Taikkyi township and the rural part of Insein township. Those in Tantabin township are in charge of the missionary at Yandoon (Ma-ubin district), those in Insein town are visited from Rangoon and the rest are looked after in the Thonze-Tharrawaddy mission. There are chapels at Insein, at Sawaingyi and at Atayaing in Tantabin township, and at Paukkon and Tawlate in Taikkyi township. About 25 children from Tawlate are boarded at school with the missionary at Yandoon. There is a school at Paukkon and at Tawlate.

Prior to the annexation of 1853 the American Baptists had founded a mission to the Karens and built churches at Hmawbi and Hlegu and they continued to prosper in spite of considerable persecution on the part of the Burman officials. In the war of 1852-53 the missionaries settled in Rangoon and founded the mission station at Ahlone (in Rangoon) and a school for the Karens. The American Baptists have now (1913) in the Insein District in connection with their Karen mission 71 churches with a membership of 4,276, 7,412 adherents, 15 ordained pastors and about 55 unordained pastors and evangelists and maintain 44 schools. Little money is drawn from America except the salaries of the missionaries and the expenses of the various schools are borne by the people themselves. There are two colleges for the training of pastors in Insein town (*see* Chapter XIV), one of which is for those who are to work among the Burmese, among whom also the American Baptists carry on mission work. An enthusiastic Christian convert Ko Paik San built huge rest-houses at Hmawbi, Daik-u and Paukkon, but the first of these was burnt down in 1912. They are little used.

Amusements.

For young and old acting or song and dance of a dramatic nature is the most attractive pastime. Children of six to nine have learnt by heart the songs of the moment and readily act them with appropriate posturing. The plays are of the usual types that have been repeatedly described, the "zat" the drama proper, often commemorating historical events; the "yokethe" or marionette performance adhering more closely to tradition; and the ceremonial "yein" or children's dance. With the older folks the marionettes find favour but the younger like the drama better. It is the "anyein," however, a music-hall variety of the "zat" which seems to gain in general favour upon both the older forms. The biograph and gramaphone increase in popularity, partly on account of cheaper prices and in spite of the fact that their performances are sooner finished than dramatic performances. The biograph only visits the larger villages, but the gramaphone goes from hamlet to hamlet and probably in part replaces the poorer class of actors. The largest villages and small towns, especially those on the railway line, are occasionally visited by a travelling circus. The pagoda festivals afford occasion for the combined display of many of these attractions

Few of the actors now-a-days are local but sometimes as at Singyan opposite Tawlate one finds a troupe settled in a small village. The local talent is for

the most part exhibited spontaneously on ceremonial occasions; of these, the "shinbyu" (ceremony of entering the monastery as a novice) affords the most frequent opportunity for the exhibition of religious song and dance. Here and there small villages still possess their band of actors who go round for hire, but most of the companies however come from Rangoon, Mandalay, Prome, etc.

Gambling, drinking and opium-smoking are still among the amusements of the elder folk, but it is difficult to estimate the extent to which they are indulged in Captain Parrott was much struck by the amount of gambling which went on in the district in 1882-83.

In some towns there are billiard tables; but the game played often resembles roulette rather than billiards. Other games of chance are variations of roulette, dice being substituted for the wheel and pictured figures of men or animals replacing the numbers of a roulette board. Three or four such are among the attractions at every village festival, but the frequenters seem to be mostly children.

Football has become popular even in remote places although the ball may be a sorry and undersized imitation of the genuine article. Recreation grounds exist at Theingyaung and other important villages, but they are often under water and the price of a good football seems to be prohibitive of the game in all but the largest towns. "Chinlon[1]" of course is the great game of the Burmans, but it is acting which breaks out irresistibly in space corners at bye moments as the true embodiment of their grace and laughter

CHAPTER IV.

AGRICULTURE AND IRRIGATION.

Outline of Development.

There can be little doubt that in former days Hanthawaddy was comparatively thickly populated—as the proverb puts it "if a plate was broken in Poung-gyee the fact would be known the same day at Toungnoo"[2]. The area under cultivation must have been proportionately extensive. But by the end of the eighteenth century the desolation even in the immediate vicinity of Rangoon is the subject of

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[1] A game in which several persons keep a light wicker ball in the air by striking it with their knees, heels, etc.

[2] Lloyd's Gazetteer, page 120. *See* also B. B. G., Vol. I, page 442 and Vol. II, pages 547, 552.

general remark [1]. Matters did not improve during the next fifty years. In 1826 Snodgrass after a week's march between Rangoon, Hmawbi and Hlaing describes the country [2] as consisting of 'thick, high, brushwood jungle, with alternate patches of rice ground ...... few high trees and many of the richest plains lying a barren waste or bearing a luxuriant crop of noxious weeds and coarse rank grass." He describes the Karen tribe as thinly distributed over the whole area, such cultivation as there was, however, being in great measure left to them([2])." These conditions cannot have been ameliorated during the disturbances culminating in the war of 1852; while there was at the same time as a further deterrent against cultivation a prohibition against the export of rice. Although the export trade was encouraged on the British occupation, it was some years before any considerable alteration was effected. At that time "*dhani*" (nipa palm) was the chief product in the delta of an agricultural nature and so late as 1867 the Deputy Commissioner reports that "the *dhani*-producing circles are wide in extent and most sparsely populated," a traveller may go a long day's journey without seeing a human being." [3].

These conditions are reflected in such statistics as are available. As at first constituted the Rangoon district contained an area of more than 10,000 square miles. According to one estimate there were in 1850 less than 50,000 acres under cultivation, less than one per cent. of the total area [4]. The area annually returned as under rice between 1853 and 1860 is shown in the following table:—

Year.				Area under rice. Acres.
1853-54	...	...	...	68,056
1854-55	...	...	...	103,678
1855-56	..	...	...	152,523
1856-57	...	...	...	209,278
1857-58	...	...	...	237,183
1858-59	..	...	...	227,207
1859-60	...	...	...	228,467

[1] Symes, page 165. Cox, pages 23, 426. See however page 4.
[2] Snodgrass, page 140.
[3] Lloyd. District Letters, 1867.
[4] British BurmaGazetteer, Volume II, page. 548.

Although subsequent to 1860 there was a steady increase in the area under cultivation the comparative stability between 1856-57 and 1859-60 leads to the conclusion that normal conditions had by this time been resumed, and if this is so the area cultivated just before the British occupation must have been about 200,000 acres.

It was twenty years before this area was doubled, but in 1869 the Suez Canal was opened. During the few years succeeding this event and apparently as a direct result there was an unprecedented expansion of the cultivated area; during the five years between 1869 and 1874 there was considerably more new land brought under cultivation than there had been during the preceding twenty years:—

Year.	Area under rice. Acres.
1850	200,000 (about)
1856	209,278
1869	397,838
1874	673,619

The district was then partitioned, and it is impossible further to trace the actual increase in cultivated area within the limits of the original district. It was again partitioned in 1883, but after each partition there has been a greater ratio of increase in the remaining area. Just before the partition of 1912 the district of Hanthawaddy, though occupying no more than a third of its original limits, contained almost exactly 1,200,000 acres of cultivated land

Primitive Conditions — Tenure

The tenure of land in the delta until some time after the occupation presents features of such importance that it is necessary to describe it in some detail. Colonel Ardagh, who was in charge of the district in 1862, has left a valuable memorandum[1] on "The mode of tenure by which the greater portion of the land in Burma is held." He shows that for the most part occupation is distinct from ownership, and writes of it as a system of tenure fully recognized by Government: "It is a system," he continues, "which if we desire to encourage as we should, the idea of property and right in the soil, our efforts should be directed to gradually abolish." The people themselves are equally definite as to former conditions; to the western mind, saturated with the idea of private property in land, it is not easy as a concrete

[1] District Letter Book, 1862.

fact to realize that it may be as free to man as air. The Burman seems to have much less difficulty in appreciating this—land is not even included among the traditional "seven noble kinds of property." Colonel Ardagh formed his opinion after personal enquiries repeated at the interval of a few months into the reason for the prevalent abandonment of land, which had been causing difficulties in the collection of revenue. "In the majority of instances," he writes, "the villagers regard land, especially paddy land, to be common land which, if unoccupied, any villagers have a right to take up, and which when they have done with they have an equal right to throw aside. If not taken up it remains the common fallow land of the villagers for a few years until it finally—on being overgrown with jungle and long grass and the bunds partially obliterated—takes its place in the waste land of the village-tract. Accordingly where land deteriorates and requires a rest it is thrown into the common fallow ground of the village and may be taken up by any one without being liable to objection by the previous cultivator, unless where the ground lying fallow impinges on the rest of his ground, in which case his permission is asked in a neighbourly manner."[1] A few years later when this practice was already absolescent, it had become generally recognized, and it is noted that the cultivator "desires to retain the cherished custom of throwing up his fields, and being released from the payment of revenue, whenever his necessities require him to do so"[2] It is clear from the above, and emphasized in many other records, that there was nothing in the nature of communal tenure; there was no such thing over large parts of Pegu as property in land; possession was a temporary incident of occupation. This mode of tenure is the more remarkable because, as shown in Chapter VI, it was accompanied by a relatively high degree of social organization in other industries.

Agricultural economy. Except, however, that for all practical purposes there was no such thing over the greater portion of the district as property in any particular area of rice-land, the characteristics of agriculture in early days resemble those of peasant proprietorship. The agricultural peasantry were people with hereditary skill in agriculture, the family sharing in the labours of the field without recourse to outside help, and producing rice mainly for their own consumption. The

[1] District Letter Book, 1862.

[2] Memo. by Genl. Fytche, 1870, B Set. Manual, Vol. I, p. 51.

favourite varieties seem to have consisted chiefly of *bawyut* and *mīdôn*.[1]

Most of their other needs they satisfied themselves from the neighbouring streams and forests and their clothing was homespun on their own looms. Hence they had no incentive to cultivate a surplus, and there are still people living who remember the grain, after a favourable season, left rotting in the fields to moulder or be eaten by the rats. Cattle were scarce—all buffaloes, there were then no oxen—there was frequent murrain and *ploughs* were hardly necessary. The heavy knife (*dah*) was the agricultural implement of most importance, and with this alone in some localities the cultivator could obtain more than three hundred baskets. But those who kept buffaloes were skilled in cattle management, treating them carefully and segregating them from contact with disease.

Naturally under these circumstances there was no definite limit to the area of the holding worked; land was free to any man to cultivate or abandon at will, and year by year he could cultivate as much or as little as he felt inclined. The usual limit would be the area which would yield sufficient to support his family; but so light was the cultivation that this may easily have been of some considerable size, while besides the area actually under cultivation in any particular year he would have a much wider area within his sphere of influence either as cultivated in the recent past, or likely to be brought under cultivation in the immediate future. It was estimated that the average holding area at the time of the annexation measured ten acres, but it has been pointed out[2] that this estimate was probably below the mark. Near Rangoon and where there was a population devoting itself to other industries surplus rice would be cultivated,[3] but it may be taken as a rule that the unit of production consisted of a family skilled in agriculture under prevailing conditions producing rice for their own consumption without recourse to outside labour and with little use even of cattle.

Lines of subsequent evolution.

From this primitive economy of the self-sufficing family there has since developed a complex organisation producing grain for the export market; as a general statement, subject to less reserve than many generalizations, it may be

[1] Lloyd. Set Rept. 1867, p. passim.

[2] British Burma Gazetteer, Vol. II, page 552.

[3] See Chapter VI

said that the unit of production used to be the family, but is now the rice-mill. The records of Hanthawaddy afford exceptional opportunity for tracing the subsequent development; it has been characterized by the following changes :—

(1) Definition of the holding and increase in its area;

(2) Differentiation between owner and cultivator. The former tends to become a business man, land-holding being a branch of a business in which rice-trading, rice-broking and money-lending are combined; the latter is either a tenant or paid agent of the land-holder, there being little difference of status between the two positions. No definite tenant class, however, is evolved, nor is there much difference between tenant or agent and the labourers whom they employ; the agent is in a somewhat superior position, the tenant may be in a worse; a phenomenon connected with this change is the growth of agricultural indebtedness;

(3) The introduction of hired labour largely unskilled, division of function, and, partly consequent thereon, a fall in the rate of wages;

(4) The organization of a market; and

(5) Improvements in the method of cultivation.

It must be borne in mind that the changes here summarized are characteristic of the deltaic and other portions of the district, which have been brought under cultivation since the British occupation. In the older cultivated tracts there are smaller holdings, there is less recourse to hired labour and less indebtedness.

Settlement of 1867.

There is little information available prior to 1867 when an enquiry was held by Captain Lloyd, the Deputy Commissioner, with a view to the settlement of revenue.[1] At that time there had been no radical change, although traces may be perceived of a transition stage. In 1861 it is reported that most of the increase in cultivation is the work of small cultivators, but already in the early sixties extra labour had to be engaged at harvest, and "flocks of Burmese lads" crowded over annually to earn a few rupees. The investigation held in 1867 did not resemble a modern settlement and the report is little more than a record of the issue of leases for periods of years. Information however as to the prevailing agricultural conditions may be gleaned by careful study. Holdings were, as now, largest in the neighbourhood of Rangoon. No particulars are given concerning the proportion of hired labour but in 1868[2] the annual

[1] See Chapter X, *Revenue Administration*.

[2] Lloyd's Gazetteer, 1868.

census showed over 20,000 labourers, and from the figures of the succeeding census it may be deduced that these were farm servants annually employed[1]

The export market had already in part been organised. In 1868 "along the banks of the Pazundaung, Pegu and Rangoon rivers are to be seen lines of rice sheds, where formerly the foot of man scarcely trod, and nothing disturbed the quiet of the river bank.........but the screaming of the monkeys. Now the sound of steam-worked machinery is heard and year by year the bank is being occupied by busy traders cleaning rice for export."[1] In this year there commenced to run four small steamers, the property of private companies, which charged for freight twenty rupees a ton. The outer terminus was Yandoon, where during the rains as many as a thousand boats collected, taking on their return journey rice for Upper Burma.[1] Already the rice mostly grown seems to have been *ngasein*, an export variety. As yet, however, brokers were not numerous enough to be separately mentioned in the statistics of population; together with lawyers there were not more than 251 of both classes in the district,[1] showing that hand grinding was largely practised still, and even the rice for export was almost entirely ground by hand.

Re-organization of agriculture, 1867 to 1882

Hitherto therefore there had been comparatively little change In 1869 the Suez Canal was opened, and despite its geographical remoteness there is ample evidence that this occurrence was a critical point in the agricultural history of the district. In 1867 there had been only two steam rice mills, in 1872 there were 17;[2] in 1869 there were less than 400,000 acres under rice, in 1874 there were nearly 700,000. Writing in 1879, Colonel Spearman can say that the hired labourer is "paid by the season living with the farmer and performing odd jobs about the house besides purely agricultural labour ... the engagement includes ploughing, sowing, reaping, threshing and gardening and the rate of payment is usually 150 baskets of unhusked rice per man."[3] About this time agricultural indebtedness, which is first noticed in 1872, began greatly to increase.

Unfortunately there is little detailed information as to the course of the change during these few years. It can be traced with some minuteness in the articles relating to

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1 Lloyd's Gazetteer, 1868.
2 Annual Administration Report, 1871-72.
3 British Burma Gazetteer, Vol. II, page 551.

circles in the Gazetteer of 1880, but it is impossible to pursue the subject in greater detail here. Information may be gathered from incidental references in many official papers. It is clear that a large proportion of the holdings had not acquired the definition of those of modern days. The abolition of the lease system was the outcome of a series of surveys which showed among other things that in many cases the possessor of land would annually cultivate only a small portion. The fallow statistics reflect the same condition. In 1871-72 any occupied but uncultivated land was reckoned fallow, and 14,000 acres were assessed at the fallow rate; in the next year a more rigorous interpretation reduced the area assessed at fallow rate to 757 acres, which had been left uncultivated in the ordinary course of husbandry.[1]

The outstanding feature of the period is the influx of foreign labour. In 1874 was passed a labour law to encourage and control the importation of coolies. This however was found to hamper rather than promote development and a system of bounties was devised. A considerable portion of this labour came to the Hanthawaddy district, and the increase in the alien population at this period may be traced in detail for many revenue circles in Colonel Spearman's Gazetteer. Immigration was also taking place from other parts of Burma, where they were unskilled in cultivation under the conditions of the delta, and the tradition of cattle management was lost. The market was acquiring a more definite organization and in 1878 the brokers were enabled to form a combination to hold back grain in order to keep up prices.[2]

Agriculture after 1882. Size of holding.

The first regular settlement of part of the Insein district on modern lines which was held between 1882 and 1884 showed that the reorganisation of agriculture on modern lines had already taken place; since then the further change has consisted in development of the conditions existing at that time. The Settlement Officer, Captain Parrott, showed that the average area of a rice-holding had greatly increased since 1870, in some revenue circles as much as 100 per cent. For the area he dealt with in 1882-83 he found the average area to be 27·44 acres and for that dealt with in 1883-84, 21·17. In 1899-1900 the Revision Settlement Officer found it over a large part of the district to be 31·16 for landholders and 20·32 for tenants. In 1910-12 the

[1] Annual Revenue Reports, 1871-72 and 1872-73.
[2] Annual Administration, Report, 1879.

Revision Settlement Officer in dealing with the whole of the district except Hlègu township found it to vary from 18 to 51 acres.

Rice cultivation.

Captain Parrott gives a full description of the methods of rice-cultivation in his report for 1883-84 (paragraph 32). The Revision Settlement Officer in 1899-1900 says he found no improvements had taken place then, but noted the increased use of straw which in early days had been thrown away as useless, as there was then plenty of grazing for cattle. Subsequently, however, cultivation increased so rapidly that grazing ground could with difficulty be reserved. In 1912 the Revision Settlement Officer had the same remark to make but says: "The single-bladed iron plough is more used now, solid wooden cart wheels have disappeared; Indians are more commonly hired to reap; the large harrow with 12 to 20 teeth is not so commonly used, the land is more manured than before: but these are minor improvements and the methods of agriculture in the settlement area cannot be called progressive. The Agricultural Department has recently, however opened an experimental farm at Hmawbi in the centre of it and a change may be looked for." Briefly speaking, the aim of the cultivator is to churn the soil of his field into a mass of soft mud and get rid of the grass If the soil is stiff and the grass troublesome as on high lands generally, he uses an iron single-bladed plough (*tè*); if not, as on low lands generally, a log of wood fitted with four or six wooden teeth (*tun*). To cut the grass he uses a heavy knife (*dah*) or, if he can afford it, a log of wood with iron blades fitted along its length (*set-tundôn*). Very occasionally one hears of wheeled agricultural implements but they are too expensive for the ordinary cultivator and are said to be too heavy for a yoke of bullocks. In the inundated tracts the nurseries are all on the high lands, mostly on the banks of the rivers, and the seedlings are taken down to the lower lands in wooden sleds dragged by men or cattle The provision of paths for these sleds is an important matter for the cultivators in these tracts. They serve as cattle paths at the same time.

North of Hmawbi rice is nearly always planted, but in the south it is usually sown broad-cast and only the bare places are planted or "patched." The former method is more expensive but gives better outturns. Insects and blight had caused damage at the time of the first settlement (1882-84) and still continue to do so especially in the old infertile lands of the valley of the Pazundaung river.

The only manure used then and now in the rice-fields is cattle-dung. A feature of the cultivation of the present day is the use of hired labour for all or nearly all agricultural operations, herding, ploughing, transplanting, reaping and threshing.

Hmawbi Experimental Farm.

There is a Government Experimental Farm at Hmawbi in the district. The ground has been laid out but no buildings had been erected in 1912. The object of the farm is the improvement in quality and outturn of the rice-crop.

Fertility.

The soil of the district is rich in many parts such as the upper part of the valley of the Hlaing but exhausted in others such as the lower part of the valley of the Pazundaung. Generally speaking, the hollows maintain their fertility because they receive the drainage from the higher lands; the latter get more and more infertile. The richest land of all is probably in the parts of Tantabin township which are liable to floods, but here cultivation is precarious. The district is so heterogeneous that an average outturn for the whole of it is almost meaningless. However, it has been calculated at 30 nine-gallon baskets of dry grain per acre. Some lands in the Pazundaung valley will not now yield more than 20 without manure or fallowing, but outturns of 60 and 70 are obtained from the best lands in the district in favourable years.

Cost of Cultivation.

The cost of cultivation in the earliest days was very small indeed, as a fair crop could be got from the virgin soil by merely clearing the jungle with a knife and sowing broadcast. In 1882-84 the Settlement Officer found it to be about Rs. 2 and 10 baskets of unhusked rice or at most Rs. 8 per acre. In 1899-1900 the Revision Settlement Officer obtained results varying from Rs. 9·83 to Rs. 14·83 and over the whole area dealt with an average of 13·11, distributed as follows:—

Value of seed.	Cattle.			Hire of labour	Miscellaneous charges and cost of implements.	Total.
	Hire.	Grazing.	Deaths.			
0·70	1·24	1·17	0·75	8·80	0·45	13·11

Bawle, Aingkalaung and Myaungtanga circles were first settled in 1903-04 and the figures for them varied from

11·19 to 14·41, and the average for the whole area was found to be 12·65, distributed as follows :—

Value of seed.	Cattle.			Hire of labour including food of labourer	Depreciation of implements.	Total.
	Hire.	Grazing.	Deaths.			
0·59	0·85	0·70	0·78	9·59	0·14	12·65

The Revision Settlement Officer in 1910-12 in dealing with the whole of the district except Hlègu township obtained results varying from 10·73 to 17·30 and a rough average of 14·40 distributed as follows :—

Seed.	Cattle.	Labour including food of labourer.	Manure, implements, etc.	Total
1·12	3·24	9·26	0·79	14·40

There has been therefore a continual increase in cost of cultivation and especially in the expenditure on wages ("labour") which cannot entirely be accounted for by the great rise in the price of unhusked rice in which wages are mostly paid when harvest comes—this grain is converted for the purpose of the last statement above at the local wholesale price, an average of several years being taken.

The Revision Settlement Officer in 1910-12 found that in the whole of the district excluding Hlègu township 71 per cent. of the owners of rice-lands were Burmans of whom 74 per cent. were residents (a "resident" being defined as one who lived not more than three miles from his holding); 12 per cent. were Karens, of whom 88 per cent. were residents; and 13 per cent. were Indians, of whom 33 per cent. were residents; and of the tenants, 83 per cent. were Burmans, of whom 85 per cent. were residents; 9 per cent. were Karens, of whom 94 per cent. were residents, and 7 per cent. were Indians, of whom 82 per cent. were residents. The number of Indian mortgagees was much greater than that of Burman or Karen and most of them were non-residents. There were few Karen mortgagees. Of the land worked by owners 72 per cent was worked by Burmans and they numbered 74 per cent. of the owners the corresponding figures for Indians being 8 per cent. and 7 per cent.

Cultivators by races.

respectively ; 48 per cent. of the whole area dealt with was let to tenants and 43 per cent. of the cultivators of the whole area were tenants. These figures indicate that Indians practise agriculture to a less extent in Insein than in the neighbouring Syriam district and that more of the land is let.

Tenants. The rise of a tenant class and the increase in the rents paid are prominent features of the development of agriculture in Insein district. In 1882—84 the Settlement Officer found that the " custom of paying a tenth of the gross outturn as tenant rate " was generally followed This was paid in kind at harvest or occasionally in a lump sum of money agreed on at the time of letting. He found a few " metayer " *i.e.*, partnership tenancies. He considered that tenants were fairly well off unless when they were obliged to hire cattle and at that time the hire of a yoke of cattle was very large and ranged from 70 to 200 baskets of unhusked rice. He gives the following figures for rice lands for those parts of the district (excluding the Hlègu township) with which he dealt in two years; together they comprise the whole of the district (excluding the Hlègu township) except Kyaukchaung circle, which was settled in 1881-82, and Bawlè, Aingkalaung and Myaungtanga circles, which were not settled till 1903-04.

Year of Settlement.	Kind of occupancy.	No. of tenants.	Area held by tenants.	Rent proper.	Government revenue if paid in money.	Total amount paid reckoned in money.	Incidence of this total rent per acre held by tenants.
1	2	3	4	5	6	7	8
			Acres.	Rs	Rs.	Rs.	
1882-83	Tenants paying revenue only.	706	7,118		17,291	17,291	2·32
	Tenants paying rent only.	30	489	1,271	...	1,271	2·60
	Tenants paying rent and revenue.	916	15,256	22,067	36,634	58,702	3·34
	Tenants hiring cattle and paying rent and revenue	11	271	1,064	578	1,637	6·04
	Total .	1,693	23,164	21,402	54,398	78,901	3·32
1883-84	Tenants paying revenue only.	123	1,201	...	4,678	2,573	2·22
	Tenants paying rent only.	26	315	1,076	...	1,076	3·41
	Tenants paying rent and revenue.	214	2,863	4,311	5,708	10,019	3·49
	Tenants hiring cattle and paying rent and revenue.	2	29	129	59	183	6·54
	Total ...	365	4,408	5,516	8,431	12,950	3·16

The remarkable points of these statements are the small number of tenants paying rent only and the small amount of rent per acre rented. Even taking into account the low price of unhusked rice in his day the tenant rate per acre falls far below what is now. He found it to be about Rs 3-4-0, converting unhusked rice into money at about 66. Using the modern rate of, let us say, 99, the tenant rate would be only Rs 4-14-0. In 1899-1900 the Revision Settlement Officer in dealing with both these areas together found that proportion of the area rented to the whole area cultivated and the tenant rate had both increased and increased more rapidly as time went on and that they had risen in fifteen years from 10·57 to 21·07 and from 3·37 to 5·23 respectively. Land was still let for one year at a time and the rents were, with few exceptions, fixed and paid in kind at harvest. He found the relations between landlord and tenant called for no legislative interference. He accounted for the low tenant rates by the fact that there was still waste land to be taken up for cultivation.

In 1903-04 the Settlement Officer found seven different kinds of tenancies in Bawlè, Aingkalaung, and Myaungtanga circles. Fixed rents in kind were most common, but partnership tenancies and fixed money rents are also numerous. There have been changes since then, however. Now-a-days (1913) the tenant very seldom pays the revenue; in the flooded tracts reduction or remission of rent is nearly always given in years of disaster; fixed money rents are few and are very frequently paid in advance. He found the average rent per acre to be Rs. 7·81. There was "no marked line of distinction between the lanlord and tenant classes". "Generally the economic position of the tenant" was "strong" and "the large demand for labour and the area of waste still available for extension of cultivation" precluded "high rents or onerous conditions." In 1910-12 the Revision Settlement Officer considered that the tenant was not in such a strong position now as all the best land had been taken up. He found in dealing with the whole of the district except Hlègu township the average rent per acre to fall below Rs. 7·81 in four unimportant tracts and to exceed Rs. 12 in one tract.

Sales and mortgages.

The sale and mortgage values of rice land have also risen greatly. The Settlement Officer in 1882—84 said that it had hardly a market value and most of the prices per acre he obtained are well below Rs. 10. The Revision Settlement Officer in 1899-1900 found the average price to

be Rs. 17·58 and the Settlement Officer in 1903-04, Rs. 25·38. The Revision Settlement Officer in 1910-12 shows that the only tract where the average price per acre falls below 25 is the poor and inundated tract in the centre of Bawlè and Aingkalaung circles and that in most tracts the price is over Rs. 30.

A comparison of the figures obtained in 1882-83, 1883-84, 1903-04 and 1899-1900 shows an increase in the mortgage value similar to the increase in the price. Thus the Settlement Officer in 1882-83 obtained few results above Rs. 10 The Revision Settlement Officer in 1899-1900 obtained a mortgage value of 15·75 and the Settlement Officer in 1903-04 one of Rs. 22·12. The Revision Settlement Officer in 1910-12 showed that the mortgage value found during his operations was always more than Rs. 18, seldom fell below Rs. 22 and was above Rs. 30 in several tracts. There is no doubt therefore that rice-land in Insein district has risen in value greatly since the annexation. There was much speculation in land between 1900 and 1910 and prices especially near Insein and Rangoon were extravagantly high.

Agricultural Indebtedness.

Since agricultural indebtedness was first noticed in 1872[1] there has been much discussion of the subject, but little study. The date when first it is mentioned indicates it as one of the earliest results of the reorganisation of agriculture. At that time it is ascribed to purchase of cattle in response to the stimulus given to extension of cultivation. In 1874[2] a partial failure of the rains increased the burden of indebtedness on this account, cattle having to be replaced before the former debts could be cleared off. By the end of the decade it is reported that the Rangoon money-lenders had a fast hold over the people of the deltaic portion of the district. It had already become customary to ascribe indebtedness to the thriftless nature of the Burman.

At the time of the first settlement in 1882—84 indebtedness had become a normal feature of agriculture. In the area dealt with in the first of these two seasons the percentage of families in debt was 62 and the average debt about Rs. 250 and in the second the corresponding figures were about 54 and Rs 257. The loans were then spent chiefly on cultivation and the purchase of cattle, especially the latter, but much of the indebtedness was attributed by the Settlement Officer to gambling.

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[1] Set. Rept., 1881-82, paragraph, 44.
[2] Annual Revenue Report, 1874-75.

In 1899—1900 the Revision Settlement Officer found that about 50 per cent. of the families examined were in debt and each of them owed on an average Rs 126. In 1903-04 the Settlement Officer obtained figures of 42 per cent. and Rs. 544 and for this " high degree of indebtedness " held responsible " the economic circumstances of the tract, the large holdings the rapid extensions and the high cost of labour ", the area he dealt with not having been long under cultivation The Revision Settlement Officer in 1910—12 in dealing with the whole district excluding Hlègu township obtained figures ranging from 31 per cent. to 71 per cent. and Rs 160 to 773, so it seems clear that indebtedness has not decreased among the people of the district since 1880

Agricultural Stock.

If the figures relating to the quantity of agricultural stock can be in any way relied upon, the extension of cultivation has not been accompanied by a proportionate increase in plough cattle. In early days there was a preponderance of buffaloes over bullocks in the proportion of about 3 to 1. In 1899-1900 the Revision Settlement Officer's figures show that buffaloes were only slightly in excess of bullocks and in 1903-04 in the three circles of Bawlè, Aingkalaung and Myaungtanga bullocks were found to exceed buffaloes in number and in 1910—12 the proportion of 3 to 1 was found to be very nearly reversed for Insein district exclusive of Hlègu township (compare also Table IV, Volume B) Of course the district may be peculiar in having so many cattle as compared with buffaloes. There is a large cattle breeding industry on the Ridge and large herds of cows are kept to supply Rangoon with milk.

Gardens and Miscellaneous Cultivation.

In Insein district orchards and gardens are of considerable though of far less importance than rice lands. There are no irrigated lands except betel-vineyards, Chinese market gardens and the fields near Insein grown with vegetables after the rice has been reaped. These are all irrigated by wells. Maize, gram and beans of various sorts, chillies onions, tomatoes, etc., and tobacco are grown chiefly along the Hlaing River north of the village of Hlaing and in the old and present beds of the Ôkkan stream. Betel-gardens are numerous near Kemmendine, but are found all through the district. Sugarcane is grown almost entirely in Taikkyi township and seems to be becoming a more popular crop. There are two methods of growing it, one in which the canes are cut and sold in lengths to be eaten raw, the other in which the juice is pressed out by a mill and then boiled to make a coarse sugar. Indians follow the former and Shans the latter method.

Orchards of mangoes, jack, marian, "danyin" and other large fruit trees, and plantain gardens are found all over the district, but especially along the streams and in the villages and on the Ridge but generally speaking it is only near Insein that they are carefully looked after and yield good profits. The pine-apples are grown among the large trees of the orchards between Insein and Rangoon. Many of the so-called gardens or orchards which are assessed to land revenue near Insein are residential estates, many of which are owned by people who live in Rangoon throughout most of the week, and yield little or no produce. A good deal of rubber is now being planted both on large estates and in small clumps in small gardens on the Ridge. The growth of rubber is yet in its infancy but the trees look healthy and many of them are being regularly tapped. Cocoanut and betel palms are found chiefly in homesteads in villages. "Dhani" palms are found in the rivers and creeks of the deltaic parts of the district, notably in the Pegu, Hlaing and Panhlaing Rivers.

Crops grown.

A statement of areas under various crops is given in Table IV, Volume B, from 1901-02 for Hanthawaddy district as it existed just before the partition of 1912, but it is very inadequate. The following figures for the Insein district excluding Hlègu township will give some idea of the cultivation of the district as Hlègu township is very like the others—in it the proportion of rice-lands to other cultivation perhaps is greater than in the other townships except Tantabin.—

Areas in acres under various crops.

Year.	1901-02.	1902-03.	1903-04.	1904-05	1905-06	1906-07.
1	2	3	4	5	6	7
	Acres.	Acres.	Acres	Acres	Acres.	Acres.
Rice, unirrigated ..	338,494	318 114	356,022	364,586	[illegible]	366,618
Maize (Pyaungbu) ..	72	57	134	121	140	168
Sessamum (late)	...	...	23	89	108	164
Chillies ...	24	38	[illegible]	40	45	70
Betel-vine . .	180	137	112	[illegible]	79	65
Sugar-cane	46	199	115	108	111	186
Tobacco	47	44	99	106	60	70
Plantains	2,643	2,972	3,149	2,705	3,79[illegible]	6,138
Mangoes						
Orchards, mixed ...	13,643	13,677	13,716	13,696	14,558	18,084
Mixed vegetables ..	646	601	725	785	951	896
"Dhani" (nipa palm)	888	776	831	843	1,244	1,278

Areas in acres under various crops—concluded

Year	1907-08.	1908-09.	1909-10	1910-11.	1911-12.	Eleven years' average.
1	8	9	10	11	12	13
	Acres.	Acres.	Acres	Acres.	Acres	Acres.
Rice, unirrigated	311,260	3[illegible]	369,0[illegible]6	370,6[illegible]7	366,479	359,3[illegible]9
Maize (Pyaungbu)	185	76	72	68	67	104
Sessamum (late)	169	6	24	29	3[illegible]	59
Chillies	79	8	11	68	15	39
Betel vine	65	60	7[illegible]	[illegible]0	56	64
Sugar-cane	100	31	17	152	146	105
Tobacco ...	71	79	80	88	76	75
Plantains	4,916	4,976	5,735	5,774	6,[illegible]0	4,384
Mangoes ...	5,751	11,122	11,825	11,105	10,841	4,631
Orchards, mixed	8,477	8,162	8,624	4,085	6,155	9,870
Mixed vegetables ...	967	1,201	1,[illegible]08	1,166	1,156	918
"Dhani" (nipa palm)	1,270	1,316	1,380	1,043	1,491	1,128

"Dhani". The cultivation of "dhani" (nipa palm) is of less comparative importance than was formerly the case when it was the main agricultural product of the deltaic districts. Prior to 1864 the revenue derived from "dhani" cutters was farmed by auction to the highest bidder and in 1863 a revenue of Rs. 3,000 was thus obtained in the Rangoon district. Thereafter licenses to cut were issued by the Indè Township Officer at the rate of one rupee per "dah" (knife)[1]. There was a great fall in revenue to Rs. 1,569 in 1864-65 and Rs. 1,83[illegible] in 1865-66. It throws a light on contemporaneous conditions to read that many escaped the tax "owing to the impossibility of getting hold of them in the vast uninhabited 'dhani' forests"[2] Subsequently it was assessed at an acre rate, which seems to have averaged about Rs 1-1[illegible]-0 before the settlement of 1882—84. In 1882—84 it was fixed at Rs. 3 per acre and in 1899—1900 and again at 1910—12 at Rs. 5. In 1882—84 "dhaniye" (the liquor obtained from the plant) and the thatch made of the leaves were both of importance and the latter sold at Rs. 2 to Rs 4 per 100 pieces ready for thatching. Since then the thatch has in most plantations become the more important product and at the present day fetches from Rs. 2 to Rs. 2-8 at the *dhani* gardens Some description of the cultivation of sugar-cane, betel-vines, irrigated market gardens and of the little double cropping that is found near Insein is given in Chapter VI of the Settlement Report for 1910—12

[1] *See* Chapter XIV.

[2] Annual Revenue Report, 1865-66.

Floods and drought and other causes of crop ailures.

The annual rainfall in Insein district is so regular that drought is practically unknown. In 1842 there was a visitation of cholera in Hanthawaddy and the planting of crops was in consequence neglected. For two months rice was scarce and famine prevailed, but the distress was relieved by imports from Arakan In 1853 as a result of the war rice in Hanthawaddy reached Rs. 8 a basket, and during the last war with Burma (1886) the cultivators experienced considerable hardship; this however was relieved to some extent by the money lending facilities which had recently developed.

The only notable instance of drought occurred in 1874. Rainfall statistics had been taken from 1870, and although these are probably rather rough approximations to the actual fall, they indicate the sudden decrease.

Year.	Inches of rain.
1870	144·6
1871	143·61
1872	118·00
1873	124·95
1874	70·80
1875	79·50
1876	97·80
1877	102·64
1878	85·30

Although in the poorest year there is a large rainfall it may not be equally distributed, and the late rains are often lighter than could be wished. Floods are very frequent. In the Hlaing and Twante townships they are first noticed in the seventies as the result of the embankments of the Irrawaddy in the Henzada district. These areas are still liable to damage, and to them is due the greater part of the remissions of revenue thereby necessitated in Hanthawaddy district in the years 1905—11. In Insein district the whole of the Tantabin township (except Padan and Wataya circles and the southern part of Lèingon circle) and the land bordering the Hlaing River from the Tharrawaddy border to a point opposite Tantabin town itself are liable to floods.

The following table shows the damage done in the periods 1872-1912 :—

Year.	Total remission of land revenue in thousands of rupees in the old Rangoon or Hanthawaddy district.	Remarks
1	2	3
1872-73 ..	8	No floods.
1873-74 ...	...	A good year—rainfall 125.
1874-75 ...	1	A bad year—rainfall 71.
1875-76** ...	61	Heaviest floods known till then.
1876-77 ...	...	No floods.
1877-78** ..	176	Severe floods—65,000 acres destroyed.
1878-79 ...	3	No floods—fine year.
1879-80** ...	101	Great floods—42,000 acres destroyed.
1880-81* ...	25	Floods.
1881-82 .	1	No floods
1882-83 ..	1	Do.
1883-84 ...	9	Small floods.
1884-85 ...	1	Do.
1885-86 ..	...	No floods
1886-87* ...	25	Large floods.
1887-88	10	Floods, but mostly in Kyauktan subdivision of Syriam district.
1888-89 ..	4	No floods.
1889-90 .	..	Do.
1890-91* ...	40	Great floods in the Hlaing Okkan, Bawle, Myaungtanga and Aingkalaung circles, 17,000 acres destroyed.
1891-92 ...	10	No floods
1892-93 ...	1	Do.
1893-94** ...	85	Great flood on the Hlaing, 20,000 acres destroyed
1894-95 .	8	Slight flood—good year.
1895-96 ...	...	No floods.
1896-97 ...	1	Do.
1897-98 ...	.	Do.
1898-99 ...	...	Do.

N.B.—A single asterisk denotes a year of floods, and two a year of severe floods. Roughly speaking two-thirds of the damage done by floods falls within Insein and one-third within Syriam district.

Year.	Total remission of land revenue in thousands of rupees in the old Rangoon or Hanthawaddy district.	Remarks.
1	2	3
1899-1900** ...	...	Heavy floods in Taikkyi township, 30,000 acres destroyed in Hanthawaddy district.
1900-01 ..	12	No floods.
1901-02 ...	8	Do.
1902-03* ...	34	Floods.
1903-04** ...	105	Great floods.
1904-05* ...	40	Floods.
1905-06*** ...	600	Very great floods, 196,000 acres destroyed in Hanthawaddy district.
1906-07*** ...	300	Very great floods, 100,000 acres destroyed in Hanthawaddy district.
1907-08 ...	..	No floods.
1908-09 ...	15	Do.
1909-10* ...	60	Floods, 17,000 acres destroyed in Hanthawaddy district.
1910-11***	300	Very great floods, 104,000 acres destroyed in Hanthawaddy district
1911-12*** ..	450	Very great floods, 150,000 acres destroyed in Hanthawaddy district
1912-13 ...	...	No floods in Insein district.

N.B.—A single asterisk denotes a year of floods, two a year of severe floods and three a year of very severe floods. Roughly speaking two-thirds of the damage done by floods falls within Insein and one-third within Syriam district.

It would seem necessary to make an embankment along the left bank of the Irrawaddy River both above and below Apyauk [1] in order to protect these lands, as that river being prevented by embankments in Henzada district from overflowing on the west spills its flood waters over the eastern (left) bank through part of Henzada and Ma-ubin districts into Insein district, but this is a very difficult question which is still undecided

In 1880 the Government of India rejected the proposal to embank the eastern bank of the Irrawaddy and the Secretary of State in Council confirmed their decision. At that time there were no embankments on the eastern side. These orders were communicated to the local authorities but in spite of them embankments were made for a total length of about 60 miles out of the length of 113 miles between Kyangin and Yandoon These two towns lie opposite the district on the west bank of the Irrawaddy and are connected by a continuous line of embankments.

In 1901 Mr. Benton, the officiating Chief Engineer, proposed that of these only the Sangin-Sagagyi embankment should be kept. In 1905 and 1906 great floods took place and the Commissioners of the Pegu and Irrawaddy divisions and the Superintending Engineer were appointed to inquire into the whole matter. It appeared that the construction of embankments on the eastern banks together with the construction of the Mônyo-Minhla Road in 1902 and of the Tharrawaddy-Letpadan branch railway line in 1902-03 had had the effect of banking back the river at Henzada and that there was great danger of the embankments on the western side being swept away if another big flood occurred. So they recommended among other measures the removal of some and the neglect of other of the embankments on the eastern side and the amendment of the existing law on the subject of embankments. It appears that the floods of 1905 carried away an embankment just above Apyauk. It was repaired by a retirement but breached by executive order before the floods of 1906 came.

As a result of the above enquiry the embankments on the east side of the Irrawaddy River have not been repaired and there is nothing to protect the western half of the district from inundation, and it is significant that, as the above table shows, floods have been more frequent and more disastrous of late years Nor is it likely that any means of

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[1] Below Henzada on the left bank of the Irrawaddy.

protecting it will be found, though gradual or sudden changes in the river itself might affect the liability to inundation. Thus a slight change in the course of the river beside Henzada town which has lately taken place may have some effect. At present the river is eroding the western bank in Henzada town. So that the present conditions and the present degree of liability to inundation of the district cannot be considered as permanent. Another result of the enquiry was the passing of the Burma Embankment Act, 1912, but its provisions were not extended to the district.

Disputes between cultivators and fishermen.

Complaints are often made by the cultivators that the working of the fisheries spoils their rice-fields by interfering with natural drainage. In the tracts liable to inundation there are numerous small streams and creeks which are allowed to remain choked with vegetation for the protection and propagation of fish, as they are usually connected with some main creek or pool which is a leased fishery. When the floods come this vegetation prevents the water from rapidly flowing off and so the crops are destroyed. There have always been disputes between cultivators and fishermen and Colonel Maxwell proposed "spheres of influence" within which the interests of the former or the latter should be considered as predominant, but this system has not been definitely accepted in Insein district.

Price of unhusked rice.

The rapid rise in the price of unhusked rice in Lower Burma is remarkable. Insein district supplies much of the grain which is exported and shares in the profits of the trade, so it is necessary to study this rise in order to understand the development of the district From 1848 until 1851 it ranged from Rs 10 to Rs. 20 per 100 eight-gallon baskets; in 1852 and 1853 the lowest rates were Rs. 25 and Rs 35 and the highest Rs. 35 and Rs. 125; these high prices were the result of scarcity, consequent on the annexation, and there was a famine in the latter year. Thence until 1866 the lowest remained steady at Rs. 40 or Rs. 45 except in one year when it fell to Rs. 35 and another year when it reached Rs. 65; the highest rate was steady about Rs 65, but there were occasional variations, the price reaching Rs 95 both in 1857 and 1862. In 1866 the lowest rate was Rs. 55 and the highest Rs 90. It is from this date that the great rise begins. There are variations, chiefly dependent on the Indian harvest, but by 1880 the lowest rate is steady at Rs 70 although the highest rate still varies greatly. From 1867 official export prices are available and exhibit a steady upward movement. The following table shows the average price of 100 eight-gallon baskets of

unhusked rice at Rangoon month by month from 1867 to 1883:—

—	1867.	1868.	1869.	1870.	1871.	1872.	1873.	1874.	1875.
	Per 100 baskets.	Per 100 baskets.	Per 100 baskets.	Per 100 baskets.	Per 100 baskets.	Per 100 baskets.	Per 100 baskets.	Per 100 baskets.	Per 100 baskets.
1	2	3	4	5	6	7	8	9	10
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
January ...	70	65—70	65	60	50	55	60	85	60
February .	75	66—71	65	60	55—57	65	60	75	50
March .	72	68—74	63—64	58—60	57—58	55—58	59	90	65
April ...	60—70	58—61	67—64	75	59—70	55	63	95	60
May .	60—66	57—63	68—83	80	53—65	60—63	68	95	60
June ..	71—73	68—69	72—88	75—82	58—60	53—55	6[illegible]	75	61
July	70	70—71	72—75	76	56	58—73	[illegible]	75	62
August .	70—76	70—72	70	75—78	55	62—67	55	78	65
September .	70—73	78	70	68—78	55—58	62—65	65	78	64
October ...	73—78	83—85	70	67	5[illegible]—67	65—68	65	.	65
November .	75—78	68—70	72—76	65	64	58	77		
December ..	67	80			60	55	.		

—	1876.	1877.	1878.	1879.	1880.	1881.	1882.	1883.
	Per 100 baskets.	Per 100 baskets	Per 100 baskets	Per 100 baskets	Per 100 baskets	Per 100 baskets.	Per 100 baskets	Per 100 baskets.
1	11	12	13	14	15	16	17	18
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
January	58	70	85—95	85—95	95	80		67
February	55	75	95—9[illegible]	100	102	85	65	68
March .	76	68—88	96—140	95—108	9[illegible]	[illegible]9	6[illegible]	72
April ..	70	92—99	145—120	95—92	9[illegible]	83	55	90
May ...	78	100—114	120—[illegible]	96—105	96	78	50	97
June	79	112—120	[illegible]35	106—1[illegible]7	107	[illegible]		89
July .	79—85	128—1[illegible]0	110—128	109	1[illegible]	78	..	95
August ..	86	136	128—128	128	10[illegible]	[illegible]0	.	94
September ...	90	140—165	125—132	115	10[illegible]	85	...	93
October ...		100—1[illegible]0	.	115	98	70	.	...
November	.	110	125	.	85	79	.	..
December .	.	...	..	...	95	78	...	...

In 1897-1900 Rs. 93·04 was considered a fair average price at Rangoon for 100 nine-gallon baskets. The following table shows the average price prevailing in the months of January, February and March, when the trade is busiest,

of 100 nine-gallon baskets of unhusked rice of 46 lbs. weight during the period 1891—1912:—

1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
1	2	3	4	5	6	7	8	9	10	11	12
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
88·00	117·23	79·29	70·80	95·00	87·92	105·00	91·61	93·50	91·53	85·69	80·53

1903.	1904.	1905.	1906.	1907.	1908.	1909.	1910.	1911.	1912.	Average price since 1891.
13	14	15	16	17	18	19	20	21	22	23
Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
101·53	89·07	96·08	102·46	117·84	131·30	1 0·64	95·15	119·53	150·40	99·83

The prices in 1892, 1897, 1907, 1908, 1911 and 1912 are remarkable; the fluctuations are due to changes in the demand from India proper, Java, Japan, the Straits and Europe and have nothing to do with local conditions.

CHAPTER V.

FORESTS AND MINERALS.

General description. The forests of the Insein district are found on and near the Pegu Mountain Range and lie almost entirely in the Taikkyi and Hlègu townships. There are, however, two small reserves, the Hmawbi reserve of about 1,846 acres, about 3 miles north of Hmawbi, and the Kyetpyugan reserve, a young teak plantation of 962 acres on the Rangoon-Prome Road, about half-way between Taukkyan and Hmawbi, which is not, however, a great success, as the growth is poor. Until 1912 the forests of Insein district lay in both the Rangoon and the Pegu Forest divisions, but in that year they were all given to the former. The reserved forests of the district (apart from the small isolated reserves mentioned above) form a compact block extending from Wanetchaung to the border of the Tharrawaddy district and fall naturally into two divisions, hills forests and plains forests.

(*a*) The Hills Forests, comprising the Ôkkan reserve (127 6 square miles), the Hlaing Yoma Hills reserve (60·8 square miles), the Paunglin reserve (105 square miles) and the Mahuya reserve (91 square miles) cover the Pegu Mountain range and form an irregular wedge-shaped block with the base at the north and extend from the Tharrawaddy border in the north to a point near Wanetchaung. The highest point of the Range in the district is the Ayodaung, 1,501 feet, on the west of the Ôkkan Reserve, but its average height is considerably lower than this being about 600 feet in the northern part and dropping to only a few hundred feet in the south. The country is hilly and broken and there are few well-defined ridges and spurs.

Hills Forests.

In describing the character of the forests, three distinct types are noticeable (1)—evergreen forest; (2) moist forest; and (3) dry forest.

Nature of the Forest.

Evergreen forest is found in all and is very plentiful in the Hlaing Yoma Reserve The ravines are choked with a tangled growth of canes, palms and the creeping bamboo On the higher ground the forest is more open and trees are more abundant mixed with bamboos, chiefly *kyathaung*.* In the evergreen forest there is no teak, the principal tree species being *kanyin* and *pyinma*.

Moist forest is characterised by the appearance of teak and *pyinkado* with *kyathaung* and *tin* bamboos. This kind of forest merges into the evergreen on one hand and the dry on the other, and it is difficult to draw a line between them.

Dry forest is very common round the headwaters of the principal streams. Teak and *pyinkado* are both common in this type of forest, but these species do not attain the length of bole or girth which they do in moist forest. The usual bamboo is the *tha'k* and *myin*. Other tree species are represented by *taukkyan* and cutch and occasionally *Ingyin* and *Thitya*.

The principal tree species in their order of relative abundance are *Pyinkado*, teak, *pyinma* and *kanyin*. Other species such as cutch, *in*, *ingyin*, *thitya* and *thingan* are found in small quantities only

Principal species.

The soil in the evergreen forest is generally a clayey loam near streams replaced by sandy loam on the higher ground. Laterite is very common. In the moist forest loamy soils with sandstone as subsoil are usual, and in the

Rocks and soil.

* For scientific names, see the list of the flora below.

dry forest the surface soil varies from clayey loam on level ground to loose shales or sandstone on the steeper slopes.

Rainfall.

The underlying rock generally is miocene sandstone and shale, the latter prevailing, but a considerable amount of laterite is found in the southern portion of the forests The average rainfall is about 100 inches.

Method of working

The hills forests are worked under the Hills Forest working-plan, and at present teak is the only species exploited. Trees of this species are girdled by the Forest department on the selection system and stand for three years before being extracted The extraction is carried out by a private company who have obtained a fifteen years' lease of these forests. They extract the girdled trees and any dead and fallen teak trees. On arrival at Rangoon the logs are measured and assessed for duty by the Forest Department at fixed rates. It is expected that within a very short time these hill forests will be opened to the extraction of timber of all species.

Plains Forests.

(*b*) The Plains Forests occupy the country between the Hills Forests and the Railway line and consist of the Magayi, Thabyu, North Hlaing Yoma and South Hlaing Yoma reserves, a total area of about 80 square miles. The country is practically level with slight irregularities towards the hills forests. Most of the ground is practicable for carts.

Nature of the Forest

The growing stock is composed of many species. Neither teak nor *pyingado* are numerous. Of other species the most numerous are, in Burmese, *myaukkyaw, bambwè, yôn, gyo, taukkyan, in, kanyin, pyinma, myatya, magyi and thayet.*

Rocks and soil.

The prevailing rock is laterite which outcrops in a very irregular manner. In places especially in the South Hlaing Yoma and Wanetchaung reserves the hills are wholly laterite. Sandstone and shales are occasionally met with and all descriptions of soils are found in each block and often in each compartment the changes being so sudden and the patches of each description so small that it is impossible to give more than a very general description. The average rainfall is about 100 inches.

Rainfall. Method of working.

The plains forests are worked under the Plains Forests Working-plan which prescribes the extraction of all species of timber. These are marked by the Forest Department according to a prescribed rotation of compartments and the trees so marked are sold standing by auction. The marking of trees and the subsequent auction take place yearly. The extraction is then carried out by the purchasers. A considerable amount of the timber so extracted is converted into

planks and much enters Rangoon in the form of fuel and charcoal.

Unclassed forests. The area of unclassed forests under forest growth worthy of the name is very small, being found only in the north-east of the Taikkyi township adjoining the reserves, and even this area is being rapidly depleted. Licenses for extraction of timber in unclassed forests are issued on payment of the duty according to the prescribed rates and the timber is extracted by the licensees.

Plantations. There is a considerable area of teak plantations (3,446 acres) in the Magayi Reserve. These plantations lie on either side of the Palôn-Kimpad. Road and extend at irregular intervals up to the Thebyu Rest-house. The success of the plantations varies. In some the growth is very good and in others poor. These plantations come under the provisions of the Plains Forest working-plan and are thinned at regular intervals. The poles which are felled during the thinning operations command a ready sale for house-posts and for fishery operations The Kyetpyugon plantation has been described at the beginning of this Chapter.

Proposals are now being made to open the hills forests for the extraction of all species—not only teak, and if this proposal is sanctioned a large increase of revenue may be expected.

Statistics of the area of the reserved forests and of forest revenue and expenditure from 190 -02 to 1910-11 are given in Table VIII, Volume B, but exclude these of Hlègu township. In 1911-12 the statistics for this township were as follows:—

Area of Reserved Forests in square miles.	Revenue		Expenditure		Profit
	Reserve Forest.	Unreserved Forest.	Establishment.	Other.	
	Rs.	Rs	Rs.	Rs.	Rs
196	2,870	6,0[illegible]3	2,492	5,[illegible]3	1,037

The reserves in Hlègu township were made to prevent destruction of timber from cultivation in temporary hill clearings (*taungyas*) and to conserve the fuel supply on which Rangoon Town makes large demands. Even in 1880 it had been noted that the plains north of Rangoon in Leingôn circle had been stripped of fuel by the pressure of the Rangoon market.

A short list of the fauna of the forests is given in Chapter I.

List of trees in the Hills Forests.

Vernacular name.	Scientific name.	Remarks.
Aukchinza ...	Diospyros, ehretioides (also Briedelia retusa.)	Used for house-posts.
Banbwe ..	Careya arborea	Gunstocks, house-posts, planks, carts, furniture and cabinet work
Bebya ...	Cratoxylon nerifolium.	Ploughs and tool handles.
Binga ..	Nauclea rotundifolia.	Good wood but little used.
Bonmesa .	Albizzia stipulata	Used for building cart wheels, furniture, etc.
Budalet ...	Egiceras corniculata.	Fuel.
Bwechin ...	Bauhinia variegata	Wood for agricultural implements Bark used for dying and tanning
Byu .	Dillenia pulcherrima.	Wood, hard and strong.
Danyin ..	Albizzia liringa	Wood useless. Fruit eaten; receives good value in market.
Didu ...	Bombax insigne	Used for planking, packing cases and tea boxes and canoes.
Dwalok ...	Kydia calycina	Of little value; bad fuel
Dwani ...	Eriolena Candollei.	Wood used for gunstocks and paddles.
Gwe ...	Spondias mangifera	Wood useless. Yields gum. The fruit is eaten.
Gyo ...	Schleichera trijuga	Wood is strong and durable, used for oil and sugar mills and good for fuel.
Gyok (or Chok)	Diospyros cordifolia	Wood used for furniture.
Hmaik ...	Cordia sp ...	Crooked tree of uninteresting character
Hmanne ..	Gardenia erythroclada.	Used for cheaper work of engraving tools, handles, etc.
Hmyaseik ...	Antiaris toxicaria	Poisonous tree; used to put on arrow for game.
Hnaw ...	Nauclea cordifolia	Good timber tree for housebuilding.
In ...	Dipterocarpus tuberculatus.	Very useful for house-building and used for boat hulls.
Ingyin ...	Pentacme Siamensis.	Used for house-posts. Wood very hard.

List of trees in the Hills Forests—continued.

Vernacular name	Scientific name.	Remarks.
Kabaung ..	Strychnos nux vomica.	Wood useless. Seldom used except for fuel
Kadet ...	Crataeva Roxburghii	Wood useless. Leaves eaten.
Kalaw ...	Cassia occidentalis	Wood useless. Medicinal material.
Kanazo ...	Baccaurea sapida	Wood used as fuel. Fruit eaten.
Kanyinbyu ...	Dipterocarpus alatus	Wood is used for house-building but not very durable.
Kanyinni ...	Dipterocarpus laevis.	Wood used for building and produce "Gurjan" oil.
Kathit ..	Erythrina (various species.)	Wood soft and light but durable.
Kathitka ...	Pentace Burmanica	Wood is light; used for boats and boxes
Kha-aung ...	Clerodendron infortunatum.	Wood useless; sometimes used as fuel
Kokko ...	Albizzia Lebbek	Valuable wood; used as cart material
Kyinyok (or Chinyok.)	Garuga pinnata	Wood useless, bad for fuel.
Kye ...	Semicarpus panduratus	Wood strong, used for house and cart building.
Kyun (teak)	Tectona grandis	Wood most useful for many purposes; light and durable.
Kyunbo .. } Kyunnalin .. }	Premna tomentosa	Useful wood but very little used. Suitable for carving and fancy work
Lein ...	Terminalia pyrilolia	Fine tree with good wood, but not valuable
Lettok .	Alstonia scholaris	Wood is not durable, used for boxes.
Letpan	Bombax malabaricum	See Didu.
Leza ...	Lagerstroemia tomentosa	
	Dalbergia glauca.	Used for bow and spear handles and boat hulls.
Madama ..	Dalbergia ovata	Wood moderately hard, used in carving dolls, etc.
Madaw	Garcinia Xanthochymus.	Wood strong and good, but not used. Fruit eaten.
Magyi ...	Tamarindus Indica	Wood is hard but not used. Fruit is generally used in medicine, curry, etc.
Mau ...	Anthocephalus cadamba.	Wood used for building but not very strong.

List of trees in the Hills Forests—continued.

Vernacular name.	Scientific name.	Remarks
Myanin ...	Xanthoxylon budrunga.	Wood a little hard; used for making yokes to carry on the shoulder.
Myaukkkyaw	Homalium tomentosum.	Wood hard; very good fuel wood and in good demand.
Myaukngo ..	Daubanga sonneratioides.	Used for tea-boxes and also made into canoes.
Myaukseik ...	Ulmus integrifolia	Wood strong but of little importance; used for building carts.
Nabe ...	Odina wodier ...	Wood moderately hard; used for wheel spokes and cattle yokes
Nagye ...	Petrosperum semi-sagittatum	Wood hard; used as fuel
Ngu .	Cassia fistula .	Wood is hard and durable; it is excellent for house-posts.
Nyaunggyat	Ficus obtusifolia	Wood is not valuable but is durable under water.
Nyaungkyin	Ficus infectoria .	Wood useless except for charcoal.
Nyaungpeinne	Ficus nervosa ..	See Nyaunggyat.
Nyaungthabye	Ficus geniculata	See above
Okshit ...	Aegle marmelos	Wood useless; chiefly valued for its fruit.
Panga ...	Terminalia tomentella.	Wood is fairly durable; commonly used in buildings.
Petlezin ..	.	Wood moderately hard; used for house-posts.
Peinne ...	Artocarpus integrifolia.	Wood is used in Burma to dye Monks' yellow robes. Fruit eaten
Petthan ...	Heterophragma adenophylla.	Wood is excellent for cabinet work.
Pyaukseik ..	Ulmus integrifolia	Common tree but very little used
Pyinkado ...	Xylia dolabriformis	After teak this timber is the most important; wood is very hard
Pyinma ...	Lagerstroemia flos regina and macrocarpa.	Wood is hard and valuable, used for house-building and boat hulls
Pyu ...	Rhizophora conjugata	Wood is used as fuel only.
Satthwa ...	Pandanus ...	Leaves produce fibre which is woven into cloth; fruit makes brushes.

List of trees in the Hills Forests—continued.

Vernacular name.	Scientific name	Remarks.
Sha ...	Acacia catechu ...	Very valuable for boiling cutch; is hard and durable for house-posts
Seikkye .	Briedelia retusa	Wood is hard; used for posts and agricultural implements
Shabyu (or Zibyu)	Cicca macrocarpa	Wood useless; used as boards in wells
Shawbyu ..	Sterculia versicolor	Wood useless. Yields fibres.
Shawni ...	Sterculia villosa	See above
Shawwa	Sterculia ornata	Same as Shawni.
Tanaung ...	Acacia leucophloea	Wood used for fuel
Taukkyan ...	Terminalia alata and tomentosa	Wood is hard; used as fuel, also house-building.
Taukshа .	Vitex leucoxylon	Wood is commonly used as fuel.
Taungpeinne	Artocarpus chaplasha	Wood is used for canoes and fruit is eaten.
Taungpetwun	Macaranga denticulata.	Used for planking
Taungtan ...	Livistonia speciosa	It is not a timber tree but a fan-leave palm; used as roofing.
Taungthabye	Eugenia grandis	Used for planking but not durable
Taungtamin	Desmodium pulchellum.	Wood hard but used as fuel
Taungthaie ..	Garcinia Kydia .	Wood not used moderately hard Fruit eaten
Teinkala .	Nauclea sessilifolia	Wood hard; used as fuel.
Thabutgyi	Miliusa velutina	Wood easil, worked and durable; used for agricultural implements
Thabye .	Eugenia	Wood fairly durable used for planking.
Thabyu . .	Dillenia Indica	Wood is not much used, gives good charcoal.
Thanat ..	Cordia myxa	Wood useless: leaves used to cover Burmese cheroots.
Thande ...	Stereospermum neuranthum	Wood moderately durable, used for building.
Thayet ..	Mangifera Indica	Wood is used for packing cases. Fruit eaten.
Thapan ...	Fiscus glomerata	Wood useless. Fruit eaten; juice made into bird-lime
Thingan ...	Hopea odorata ...	Wood is very durable; boats made of it are said to last twenty years
Thinkadu ...	Anisoptera glabra	Wood used for planking but not durable

List of trees in the Hills Forests—concluded.

Vernacular name.	Scientific name	Remarks
Thinwin ...	Millettia leucantha	Wood very hard; used for cross pieces of harrows.
Thitcho .	Sideroxylon tomentosum.	Wood made into beams for houses. Fruit eaten.
Thitka ...	Pentace Burmanica	Timber is valuable and durable and used in Burma for boats and boxes.
Thitmagyi	Albizzia odoratissima	Wood is hard and durable and used for many purposes
Thitpyu	Xanthophyllum species	See above
Thitsein ...	Terminalia Belerica	Wood not durable. Fruit eaten.
Thitpok ...	Dalbergia Purpurea	Wood is soft and useless
Thitpagar ..	Millettia Brandisiana.	See Thitpok.
Yemane	Gmelina Arborea	Wood is fine and durable, used in carving, engraving and furniture-making.
Yehmyot	Trewia nudiflora	Wood is good and soft, used for drums and agricultural implements
Yindaik	Dalbergia cultrata	Splendid hard wood; used for ploughs bows, handles for knives and sticks, etc.
Yingat	Gardenia obtusifolia.	Wood easy to work and durable; produces fine yellow flower
Yinma ...	Chickrassia tabularis.	Fine furniture wood. Piano cases are made in Europe
Yon	Anogeissus acuminata.	Wood is not strong; it warps and cracks; used as fuel
Zaunggale ..	Lagerstroemia villosas	Wood is moderately hard; used as planking in house-building.
Zibyu	Cicea macrocarpa	See Shabyu.
Zinbyun ...	Dillenia pentagyna	Wood useless; only used as fuel. Fruit eaten.

Creepers.

Dauktalaung	...	Dalbergia stipulacea.
Goyinnwe	...	Entada scandens.
Kywe	...	Dioscorea.
Nweok		Pocderia launginosa.
Nwesat	...	Symphorema involucratum
Pauknwe		Butea superba.
Pauksat	.	Spatholobus parviflora
Subok	...	Acacia concina.
Yinhnaungnwe	...	Vitis Linnoei.

Bamboos

Vernacular name.	Scientific name.	Remarks.
Kyathaungwa	Bamusa polymorpha.	A large bamboo, best in Burma for building.
Myinwa ...	Dendrocalamus strictus.	Strong and elastic; used for all purposes in building.
Tinwa ...	Cephalostachyum pergracile.	Chief bamboo in Burma, thin-walled; used in mat making, building, etc.
Thaikwa ..	Bambusa tulda ..	Most common; used for general purposes, young shoots are eaten.
Wabyu .	Oxytenanthera albociliata.	Tufted, straggling bamboo of little value.
Wathabut ..	Dinochloa Maclellandii and Pseudostachyum Helferi	"Wanwe" in Burma, joints of bending different ways; zig-zag appearance, and useless
Waya .	Dendrocalamus longispathus	Good and valuable bamboo; used for building and basket making.

Monocotyledons.

Minbaw ...	Cargota urens ..	Similar to cane; wood hard outside, soft inside, poor villagers use it for beams in house-building
Kyeinban ..	Calamus .	An erect palm used as cane in tying rafts; people eat the raw shoots
Kyeinka .	Calamus fasciculatus.	Large climber; canes thin but strong, make good walking sticks.
Kyeinni ..	Calamus garuba	Climber Canes slender; used in making baskets.
Salu ...	Licuala peltata ...	Fan leaved palm; used for roofing, thatching, etc.
Satthwa ..	Pandanus	See "Satthwa" in timber species.
Thaing ..	Calamus erectus	Thorny cane; wood hard, much like "Kyeinban".
Zemata .	Calamus latifolius	Climber Canes stout and thick, used as walking sticks, baskets, etc.
Zanon ..	Calamus arborescens.	Erect palm; wood not much used.
Taungtan ..	Livistonia speciosa	See "Taungtan" in timber species.

List of trees observed in the Plains Forests.

Burmese name	Botanical name.	Remarks.
Aukchinza ...	Diospyros ehretioides.	See Hill Forests
Zibyu ...	Phyllanthus emblica.	Do.
Zaunggale ...	Lagerstræmia villosa.	Do
Kinbalin ...	Antidesma species	Fuel; small tree. Leaves and fruit eaten by Burmans
Ngu ...	Cassia Fistula ..	See Hill Forests.
Hmanni ..	Gardenia erythroclada.	Do.
Hman-byu ...	Randia uliginosa	Wood hard; used for cheaper work of engraving, tools handles, etc.
Kabaung ...	Strychnos nux-vomica.	See Hill Forests
Petthan ...	Heterophragma adenophylla.	Do.
Thande	Stereospermum neuranthum.	Do
Htagyi ..	Pterospermum semisagitatum	Do.
Taungpetwun	Pterospermum acerifolium	Useful and durable wood for making agricultural implements.
Chinyok ..	Garuga pinnata	See Hill Forests
Thabutthein...	Miliusa velutina	See Thabutgyi in Hill Forests
Myatya ..	Grewia microcos	See Nagyi in Hill Forests
Pauk ...	Butea frondosa .	Wood not durable; used for well curbs and piles.
Pauknwe ..	Butea superba .	. .
Suyit ...	Acacia pennata	.
Kanyin .	Dipterocarpus laevis and alatus.	See Hill Forests. Kanyinbyu and Kanyinni.
Pyinma ...	Lagerstrœmia flos reginæ .	See Hill Forests.
Pyinkado ...	Xylia dolabriformis.	Do
Thingan ...	Hopea dorata ..	Do.
Leza ...	Lagerstræmia tomentosa.	Do.
Thitni ...	Amoora Rohituka	See "Thitka" in Hill Forests.

List of trees observed in the Plains Forests—continued.

Burmese name.	Botanical name	Remarks.
Bambwe .	Careya arborea	See Hill Forests.
Kanazo .	Baccaurea Sapida	Do
Thayet .	Mangifera indica	Do
Mayan ...	Bouea oppositifolia	Wood is used for brake-blocks for Railway carriages Fruit eaten.
Letpok	Sterculia alata ..	Excellent avenue tree
Thitpok ..	Dalbergia purpurea	See Hill Forests
Bon-me-za	Albizzia stipulata	Wood is rather light; used for building and cart wheel .
Hadi	Bursera serata ..	See Hill Forests
Madaw	Garcinia xanthochymus	Do.
Taung-thale	Garcinia kydia ..	Do
Kyun	Tectona Grandis	Do
Yon .	Anogeis acuminata	Do
Binga ...	Nauclea rotundifolia.	Wood moderately hard, suitable for planking, also used as posts.
Hnaw ...	Naculea cordifolia	See Hill Forests.
Thinwin .	Millettia leucantha	Do
Thitsein ...	Terminalia belerica.	Do.
Seikkyi ...	Briedelia retusa .	Do.
Yamane .	Gmelina arborea	Do.
Panga ...	Terminalia tomentella.	Do
Lein ..	Terminalia pyrifolia	Do.
Gyo ..	Schleichera trijuga.	Do
Taukkyan	Terminalia tomentosa and alata.	Do
In ...	Dipterocarpus tuberculatus.	Do.
Ingyin	Pentacme Siamensis.	Do.

List of trees observed in the Plains Forests—concluded.

Burmese name	Botanical name	Remarks
Thitya ...	Shorea obtusa .	Very good wood for big boats; is hard and durable.
Gwe	Spondias mangifera.	See Hill Forests
Wathabut ..	Pseudostachyrum helferi.	Do
Wabyugale	Gigantochloa albociliata	See "Wabyu" in Hill Forests
Tinwa	Cephalostachyrum pergracile	See Hill Forests
Hmyinwa .	Dendrocalamus strictus	Do.
Kyathaungwa	Bambusa polymorpha.	Do.
Thaik .	Bambusa tulda .	Do.
Wanetwa ...	Gigantochloa macrostachya.	Large handsome species; used in building, also for tent posts
Zinbyun	Dillenia Pentagyna	See Hill Forests
Myaukkyaw	Homalium Tomentosum	Do.
Aranbo	Cryptoneria paniculata.	Wood hard and durable; used in house-building
Thitka .	Pentace Burmanica	See Hill Forests.
Taungmayo...	...	Wood light and durable. Juice is poisonous, used for making slippers
Thitsanin	Dalbergia nigroseas	See Hill Forests.
Sethanbaya ...	Randia longispina	Wood useless; trees very small; fruit very poisonous to fishes
Mondaing	Bophoputalum Wallichii	Wood moderately hard; used as furniture
Htan ...		A most useful palm whose wood, fruit leaves, etc, are used for all sorts of purposes
Yingan ..	Zalacea	Erect like palm; the wood used as corks, thorny species. Fruit eaten
On .		The cocoanut tree
Salu ...	..	See Hill Forests.
Dani	.	Erect palm leaves; used for roofing; juice used as a drink.

Analysis of table.

In matters of detail little reliance can be placed upon this table; varying classifications of occupations at different times and alterations in the area of the district have exercised a disturbing influence too great to permit of useful comparison between the actual figures for different years. But it is useful in tracing the broad outlines of general movements. Although it shows the preponderance of industries of an agricultural nature, it does not fully illustrate the concentration within the district upon the production of rice. This can be illustrated by another analysis The preponderance of males in the manufacturing class in 1901 is almost entirely accounted for by the inclusion of 8,047 rice mill operatives, the similar preponderance under the heading "commercial" is accounted for by the presence of over 9,000 males who are engaged in transport and storage, the females under this head numbering no more than 405 Of these 9,000 odd there are 6,195 boatmen and bargemen. It is interesting to observe that in 1891 prior to the organisation of the milling industry within the limits of the district there were still more females than males engaged in manufacture, as had always been the case in previous years Transport however had already been organised on modern lines in 1881. In that year there were 5,832 boatmen engaged on inland waters, and 1,404 upon the sea, while there were 2,07[illegible] cart drivers This is a further illustration that the agricultural revolution was complete in all essentials in 1881, cultivation had been dissociated from disposal of the crop Another economic change is indicated in this table In 1868 the number of people shown as being in domestic service is 20,754. In Lloyd's Gazetteer these are all classed as labourers but their actual position is apparent if a comparison be made with the figures of 1872 It is clear that the large majority of those engaged in domestic service in 1872 were farm hands Those included under agriculture are almost entirely cultivators other than hired labourers. It is not without significance that there is an increase in the hired labour and a decrease in the number of employers during these few years. But the point of most importance is that these people are shown as domestic servants because they were engaged throughout the year, a practice which died out so rapidly and so thoroughly that although described in 1880 as being the ordinary custom it finds no mention at all in the report on the actual investigations made by the Settlement Officer of that year. In 1911 the population of Hanthawaddy district

as it existed just before the partition of 1912, was distributed as follows —

Occupation				
Professions		..		9,661
Agriculture	..		..	393,955
Commerce	..	.	.	82,856
Industry	..	..	.	27,515
Other occupations				45,142
		Total	...	539,109

Figures for the Insein district are not available, but except in Insein and the environs of Rangoon and in the towns along the Rangoon-Prome Railway and among the villages of the Ridge and the Pegu Range the population is almost wholly engaged in the rice-industry.

General conditions at the annexation of 1853.

The foregoing table shows in some degree how the activities of the district are concentrated on the production of rice for the export market. It is obvious that this has not always been the case, and there can be little doubt that in the early days of the British occupation over large portions of the district, possibly over the larger portion, agriculture was not the important industry it is now and the cultivator was in the main concerned with production for home consumption. It is not therefore altogether easy to form a mental picture of the industrial condition of the district at the time of the annexation. It would appear however that the Talaings, generally speaking were engaged in fishing and the Burmans and Karens and Shans who occupied the plains, in agriculture. The Karens and Shans who lived on the Ridge, especially the Shans, cultivated gardens.

Rice was mostly grown for home consumption. Dhani growing, an occupation of less importance, was confined to the lower parts of the main rivers. In Hlaing township reed mats of a fine quality were made, and the Yabeins in the hills of the Taikkyi township bred silkworms. In early days however fish was obtainable free of charge in almost every hamlet, and almost all the clothing was woven by the women on their own looms. As the concentration on rice production has developed these industries have died away. In 1881 there was still 13 people in the Hanthawaddy district engaged in making looms, but in 1901 none were either made or sold. In the former year 6 people returned themselves as dealing in coloured dyes, but there is no such entry in the returns for 1901.

Industrial methods.

Agricultural methods are explained in Chapter IV; those employed in fishing in Chapter X; the manufacture

of pottery, as it was carried on when still of some importance, is described in the British Burma Gazetteer, Volume II, page 558; at the present time it is not of sufficient importance to justify description.

Modern industries.

Thus there has been over the district as a whole tendency to decay of localised and village industries, and concentration upon the production of rice for the export market. But in recent years there have been two new developments, one of these directly connected with the general movement, the other is an adventitious growth resulting from the proximity of a great commercial centre. The former consists in the establishment of steam rice mills at outlying centres. These however are neither numerous nor important; they mostly grind rice for local consumption and are managed by Indian and Chinese millers at a small rate of profit, and often at a loss. So long as present conditions obtain it is unlikely that there will be any great development in this direction. The other development consists in the establishment of saw-mills brick fields, mills and factories of various kinds usually near the railway.

Although the old village and localised industries have declined there are still important occupations not carried on in factories, nor directly connected with agriculture. Trade is in the hands of the Indians and Chinamen, the latter usually having the largest establishments. Shops for the most part are of two kinds, clothing and dry good stores, but it is only in the larger places that differentiation is carried so far as this; in others there may be two or three village shops but all of them supply much the same kind of article, and cater for all village wants. The pedlers are Burmans, if they are people of the neighbourhood they are usually women; if they are men they are usually Upper Burmans numbers of whom come down annually from Pakôkku. Indian sweetmeat sellers are often met with.

Occupations and their distribution at the present day (1913)

The great majority of the people in the district are agriculturists, and of these the great majority are hired labourers, a great many are tenants and the rest are land owners. Near the forests are found bamboo cutters and charcoal burners and collectors of forest produce and men hired by the Forest Department for various services such as fire-protection and tree-thinning and by private companies and traders for working timber. There are one or two saw mills, mostly along the Railway line and not far from the forests, which employ labourers. Carters too are numerous and make large profits in the rice season. Musicians and actors are found here and there, sometimes

even in a small village, and travel to the various places in which they are hired. Near the rivers are found boatmen and fishermen. There are a few weavers of bamboo baskets and matting. The women weave cloth in many of the villages but this industry has almost died down on account of the cheapness and abundance of foreign piece-goods. Bazaar sellers are found everywhere and there are many blacksmiths and goldsmiths. In the large village shop keepers and money lenders and traders, usually Chinese or Indians, are met with. In certain places, as for instance in Bawle circle, the villagers make a good deal of money by herding cattle sent to graze from other villages, often very far distant, where there is insufficient fodder. Tantabin township is almost entirely agricultural and so are Hlègu and Taikkyi townships to a very great extent, but the last two contain most of the forests of the district and they afford employment to a considerable number of persons. The greatest variety of occupations is found in Insein township. All four townships contain rivers and creeks which support a large fishing and boating population.

A good number of Burman cultivators go to Pegu and Pyapôn districts to cart and to work in the rice fields in the rains and during the harvest. Many go to the latter district in boats to cut firewood which they sell on their way home and also in their own neighbourhood. Some also take cattle to herd in Pegu and Maubin districts. A few go to Maubin from Bawle and Mingyalaung circles to work fisheries. But on the whole the number of residents of the district who earn a living outside it is very small. Near Rangoon probably they are most numerous because many persons employed in Rangoon have residences in the district.

CHAPTER VII

MEANS OF COMMUNICATION

Post and Telegraph.

The ordinary postal and telegraph services are maintained by Government from Provincial Funds. There is telephonic communication between Rangoon and Insein and the Mingaladon Golf Club at Tanyingôn. There used to be a district postal service maintained by the District Cess Fund but it was discontinued from the 1st April 1906[1].

[1] Financial Department Circular No 29 of 1906

Railways. The Rangoon-Mandalay Section of the Burma Railways enters the district about seventeen miles from Rangoon and a little south of Kawche Railway station and passes through the intermediate stations in order of Dabein, Ledaunggan, Tewainggyi, Togyaunggale and Thingangyun

The line is double as far as it lies in the district A short branch single line runs from Mahlwagon through the village of Tamwe to that of Bauktaw on the Ridge beside the Kyaikkasan Pagoda. Thingangyun is a favourite place for suburban residence and the Railway Company supplies a service of local trains between it and Rangoon.

The Rangoon-Prome-Henzada-Bassein Section of the Burma Railways enters the district about half a mile north of Kemmendine station and runs almost directly north until it reaches the Tharrawaddy border about four miles beyond Paukkon station The line is double as far as Wanetchaung. There are no branch lines unless a short one connecting Wanetchaung with laterite quarries in the forests on the east may be so called These railways are much used by the people who seem to be fond of travelling and willing to spend money freely when going for a day's shopping or pleasure or to attend a criminal or civil court at the township headquarters. There is a fast local service of trains between Insein and Rangoon. Indian vendors of refreshments of all sorts run up and down the platforms crying their wares in bad Burmese and of late years beggars have appeared on them. •

They are little used for carrying unhusked rice, the main product of the district, however, and statistics show that hardly any is carried to Rangoon from stations nearer than Hlawga Okkan (Paukkon) station sends a good deal as it serves the country remote from any waterway on the east of the Railway. The freight to Rangoon for 100 baskets of unhusked rice is about Rs. 3 from Hmawbi, Rs 5-8 from Taikkyi and Rs. 6-8 from Okkan (Paukkon) The people prefer to send their grain by river because it is as a rule nearer to their fields, there is little trouble and no delay in loading, better prices are obtained and the grain can be taken without difficulty from mill to mill in search of a good price.

Ferries and rest-houses. A list of ferries is given in Volume B. Most of these are on the Hlaing. The "Wataya" is the Hlaing and the "Ngamoyeik" the Pazundaung River. A list of rest-houses is given in Volume B in the table showing the chief towns.

Waterways. There are four great tidal waterways which serve the district and meet just outside it in Rangoon Town, *viz*, the

Pegu, the Pazundaung, the Hlaing and the Panhlaing Rivers The first bounds the district on the south-east and separates it from Syriam district There is a service of launches on it and together with its tributaries it carries an immense amount of rice to be ground in the mills in Rangoon

The second is much smaller but it too has its service of launches which ply as far as Hlègu. It is important as affording direct communication between Hlègu, the township headquarters, and Rangoon and it passes only four miles from Insein, the district headquarters, but a few hundred yards of road are still required to connect the latter with the river bank at Thayetkôn. This river also brings great quantities of unhusked rice to Rangoon. Its upper tributaries tap the rice-lands of Hlègu township, lower down the Malit stream forms the boundary between this and Insein township and serves as a carrier of the grain grown in the remoter parts of the Yetho circle Another, the Bala stream, serves the Bala and Yetho circles and lowest of all the Theingyaung stream leads into the heart of Kyaukchaung circle and is navigable for small cargo boats as far as its chief town, Theingyaung

The third, the river Hlaing, rises in Tharrawaddy district under the name of the "Myitmaka" enters the district about five miles west of the Railway line and runs parallel with it until it reaches the township headquarters, Tantabin, when it begins to converge towards it and finally enters Rangoon Town within a mile of it It is tidal throughout most its length in the district but the tide is little felt above the village of Hlaing which is the terminus of the services of launches maintained by the Irrawaddy Flotilla Company. In the season (January to March) boats and barges laden with rice are continually sailing or being rowed up and down it, even above Hlaing Of its chief tributaries the Okkan and the Gyobyu streams are navigable only for small boats, the former for some twelve miles the latter for only a short distance from its mouth, but the other, the Hmawbi stream, is more of the nature of a tidal creek and carries boats and barges full of rice, earthenware pots, fish-paste, etc, from its mouth as far as the town of Hmawbi on the Railway.

At Tawlate the Hlaing divides into two branches The one on the east retains the name The other, called the Bawle River, is narrower and deeper and has no shoals in it such as make the navigation of the Hlaing after their separation, difficult, for instance just above Thayetchaung or opposite Leingon. Just above Bawle village it is joined by its tributary the Pakun a small and narrow but deep

stream of similar character which affords communication with the flood-harassed *kwins* of the south-west of Aingkalaung circle and conveys their meagre surplus of grain to market. The combined stream then flows almost directly south dividing the district from Thôngwa till at Daunggyi it throws off a branch, the Kokkowa Creek, which flows directly east to meet the Hlaing at Tantabin. The Bawle River leaves the district about four miles beyond the junction but its value as a carrier of men and produce is not lost to it because about four miles further on still, at Mezali, it joins the Panhlaing River.

This enters the district from the west about four miles east of Mezali and flows for about twenty miles as its southern boundary till it meets the Hlaing just above Kemmendine. In the rains it is big enough to carry the largest steamers of the Irrawaddy Flotilla Company from Rangoon to Yandoon on the Irrawaddy River and is in fact the shortest river route to Upper Burma, but in the dry weather there are several shoals which at low tide give trouble to launches of even small draught. It has been abandoned by the Company as its winding course makes navigation difficult and it is not a remunerative trade route These main tidal streams have swift currents and sudden bends and deep pools and are not free from eddies which may be considered in some cases dangerous On the 19th February, 1912 the steam launch "Chinho" suddenly heeled over and sank just above the village of Thabawchaung on the Hlaing River and about fifty persons were drowned. The official inquiry showed that the vessel was apt to roll but quite stable and that a rush of the passengers from one side to the other during a roll caused the accident, but an interesting point was raised, namely, the effect of a strong eddy on a vessel fitted (as the "Chinho" had lately been) with bilge keels. It appears that expert opinion is divided as to the benefit or danger of "fitting bilge keels on light draft river steamers trading in strong tides." It has now been suggested that a partition should be made running fore and aft up the centre of the upper deck of small launches to prevent a rush of passengers from side to side. Besides these four great channels and their main tributaries there are numberless tidal creeks running into the heart of the plains which make travelling by boat easy and popular and render the carriage of produce to Rangoon cheap and rapid. Except near the hills in Taikkyi township there is hardly a village of more than twenty-five houses which has not a navigable stream running through it or within a very short distance.

The Roads.

The district is not so well equipped with roads The main trunk from Rangoon to Prome and Toungoo entering the district on the west of the Kokine Lake runs directly northwards on the top of the Ridge till it reaches the village of Taukkyan where it branches into two main roads one leading eastwards to Hlègu, Pegu and Toungoo and the other continuing northwards to Tharrawaddy and Prome leaving the district at the same point as the Railway, about four miles north of the town of Paukkôn

Each of these has a system of feeders From Rangoon leave two other roads parallel to the Prome Road one on either side of it On the east the Kokine Road skirts the eastern margin of the Kokine Lake, throws out a short branch to the village of Kanbe and then curving westwards crosses the Prome Road at the village of Thayetkôn continues down the slope of the Ridge, crosses the Insein Road and the Railway at Thamaing and finally terminates at the Rifle Range a few hundred yards from the bank of the Hlaing River On the west the Insein Road branching off from the Prome Road just before they enter the district runs alongside the railway and at the foot of the Ridge through Insein town to Tanyingôn village near the border of the Mingaladôn and Kyaunggôn circles to meet the road running from the Prome Road near Sangyiwa past the Mingaladôn golf links to the pick-up railway station of Mingaladôn It does not stop here but degenerates into a footpath which runs northwards for another four or five miles to meet the Leingôn-Hlawga-Taukkyan Road at Hlawga

The town of Insein has its own system of roads and streets but the only one which need be mentioned here is that which runs from the landing stage on the Hlaing River through the town and climbs the Ridge to meet the Prome Road.

The Leingôn-Hlawga-Taukkyan Road leaves the Prome Road about half a mile north of the point where the Hlegu-Pegu Road diverges from the latter and dips and winds round the northern end of the Hlawga Lake through the most pleasing forest scenery varied by an occasional vista of the lake itself. It used to go almost directly west to Hlawga, but the construction of the lake made its diversion necessary.[1] As far as Hlawga Town (as on the Sangyiwa-Tanyingôn Road) there is little or no traffic on it as there is little or no rice grown in the neighbourhood, a thinly populated one, and garden produce is carried into Rangoon by carts or coolies

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[1] See page 7.

along the Prome Road. Between Hlawga and Leingôn however it is much used both for carting rice to the river bank and as an important link between the railway and the river. Its port, Leingôn, however is not a good one as launches can only reach it at high tide.

If the Insein Road were widened and bridged between Tanyingon and Hlawga, it would constitute with the Leingôn-Taukkyan Road and the Prome Road a splendid circular motor ride of some forty-five miles for the people of Rangoon

The next feeder as we proceed northwards is one of about five miles to Wanetchaung which leaves the Prome Road just where the latter bends suddenly westwards down the slope of the ridge to the town and railway station of Hmawbi among its rice-fields This is not much used. The Prome Road passes westwards forming the main street of Hmawbi where it crosses the Hmawbi stream and gradually ascends till it reaches the Hmawbi Ridge when it takes another sudden turn to resume along the Ridge its natural direction to the north. Just at the turn it throws out a feeder six miles long which crosses the Hmawbi stream at the large village of Minywa where it enters Leingôn circle, and meets the Hlaing River at Shwehle directly opposite Tantabin, the headquarters of the township of the same name.

The next feeder too is a link with a river being a branch of nearly four miles long leaving the Prome Road at Tagwa and crossing the low-lying rice land, so often swept by floods, to Thayetchaung a village on the Hlaing River about three miles below Tawlate. This is a most important link as along it passes all the traffic between the township and subdivisional headquarters, Taikkyi, and the roadless rice-lands and fisheries of the northern part of Bawlè and the southern part of Aingkalaung circles

From Tagwa to Taikkyi is only three miles Here the Prome Road touches the Railway again but does not cross it and proceeds northwards to Palon-Ywama where it is connected with the railway by a branch of about a mile in length which goes to Palon Railway Station and thence beyond the Railway into the Forest Reserves and terminates in their depths near the village of Kinpadi. From Palôn-Ywama the main road goes northwards to Okkan-Ywama, bends sharply to the east to cross the Railway at Paukkôn and then runs close beside the rails till they reach the Tharrawaddy border.

The Hlègu-Pegu Road has no feeders between Tauk-

between Tagwa and Thayetchaung which falls south of the Aingkalaung circle. The length and maintenance of main roads only are given in Volume B, Part I, and similar statistics for roads generally are given in Table XI of the same volume.

CHAPTER VIII.

FAMINE.

Scarcity. There is no record of famine having occurred in the Insein district except perhaps in 1842, when a violent outbreak of cholera caused the fields to be left unsown, nor is there any likelihood of its occurring in the future. A very low rainfall (71 inches) in 1874 led to a scanty harvest and some distress, but nothing approaching a famine. Sometimes a slight scarcity of food occurs in seasons of floods in the low lands in the extreme west of the district, that is in Bawlè and Aingkalaung circles and the western parts of Myaungtanga circle, and to a very small extent even over the whole district in a season of high prices of unhusked rice when the cultivators are tempted to sell all or nearly all their store without keeping enough for their own and the consumption of their hired labourers and are forced to buy rice later at correspondingly high prices Both 1910-11 and 1911-12 were examples of seasons of floods and of high prices and in both some scarcity of food was reported. It is remarkable that in Rangoon (which adjoins the district) there have lately been some cases of death occurring in the streets from what appeared to be destitution or disease which the want of food rendered the victim unable to resist. This may be due to the exceptionally high price of rice which prevailed in 1911 and 1912, or it may be due to the increase in the immigration of beggars, or perhaps Rangoon is now rapidly losing any likeness it had to a Burmese village and is becoming a foreign city full of many races where charity to be effectual must be organised.

CHAPTER IX.

GENERAL ADMINISTRATION

Organisation of Hanthawaddy. Period 1376—1566. In the year 1376 A.D., "Hanthawaddy" was organised into thirty-two provinces or townships by Razadirit [1]. Among these the Province of Dala was not included [2].

[1] Hanthawaddy Sittan and History of Syriam.
[2] History of Syriam.

This remained as a separate although a less important unit until the British occupation, when it was incorporated in Rangoon district [1] and the revenues derived from it were assigned by custom to the chief queen of the reigning sovereign whether of Syriam, Hanthawaddy or Ava

The empire was subsequently remodelled by Dhammazeti about 1450 [2], but the internal organisation of Hanthawaddy remained unaffected until the British assumed control. The greater portion of the territories hitherto united under this name was then distributed between the two districts of Rangoon and Martaban; some of the provinces or townships retained their status under the latter designation and others of less importance became revenue circles.

Further details are not obtainable until in the sixteenth century Hanthawaddy commences to attract the attention of adventurers in India and Europe Syriam rose into prominence as a port and in 1566 a governor was stationed there by Sinbyumyashin "to settle the assessment and levy of revenues among the towns and villages in due proportion so as to provide for the officials [3]." Fish, cocoanuts, sugar and plantains are mentioned among the contributions, and "the royal tribute of betel from Dala gardens had to be brought into the Royal Treasury of Betel at Syriam" At the same time Syriam was appointed as a watch port and three war boats set there, for the support of which the people of the locality had to contribute in kind and service

Reforms of Tha Lun Min Tayagyi.

In 1632 Tha Lun Min Tayagyi, the Emperor of Pegu, removed his Court to Ava [4]. Hanthawaddy naturally diminished in importance and Syriam, now the most important revenue station of the empire, gained at its expense Accordingly the *Akunwun* of Hanthawaddy was moved to Syriam, where in addition to his former duties he was charged with taking toll of the ships arriving there[1]. This was not the only reform of this sovereign He reorganised the general administration of the revenue. "He appointed officials for the receipt of custom The five districts of the Karens and the people of all the towns and villages of Hanthawaddy had to provide the twelve kinds of revenue—a toll of gold, a toll of silver pieces, a toll of rope, tolls of the two varieties of cane, a toll of wood oil, a toll of madder (for dyeing), a toll of powder, a toll of paddy,

[1] Symes, page 142.
[2] Forchhammer: Notes on Early Geography.
[3] History of Syriam.
[4] Phayre: History of Burma.

a toll of chillies, a toll of salt and a toll of salt-fish. The *Akunwun* had to keep record of the revenue and pay it into the Royal Treasury, the clerks of the *Akunwun* had to keep accounts of the revenue collected in detail and in brief make out the lists for the High Clerks of the Royal Court "[1]

Period 1632—1784.

There are incidental references to administrative methods between 1632 and 1784, but it is at present impossible to assign them even approximately to their proper dates. Despite the high degree of organisation it appears that, excepting such obvious items as the commission on brokerage and money-changer's profits, the greatest part of the revenue consisted of payments in service and kind. The people of Syriam had to provide the Governor's guard, the boat caulkers had to give their services when required; many held rights of jurisdiction by naval and military tenure. In some cases the connection between the occupation and the service rendered seems remote, thus in Syriam the washermen and barbers had to provide oil torches at festivals, the money-changers and the brokers provided wood oil, while people from the quarter of the boat caulkers had to carry the torches after they had been made. On the occasion of the three yearly festivals and on the accession of a monarch aids were levied[1]; but of these the incidence appears to have been rather haphazard, they would not for instance be collected in a newly colonised township [2].

Modern Burman Administration.

Towards the close of the eighteenth century much more material concerning the administration becomes available. Light is thrown upon it in the works of Sangermano, Symes and Cox, and especially in revenue matters considerable detail is forthcoming from the still surviving records of the surveys held in 1784 and 1803. These set forth the revenues and boundaries of each township in Hanthawaddy; the originals however which apparently included rolls of all the households, are no longer in existence. Of the survey of 1784, records are only left [illegible] townships, but those of 1803 are practically complete except for the detailed lists.

With the revival of the Peguan Empire in 1740 Syriam had again become subordinate to Pegu, and when Alaungpaya brought about the final downfall of the Talaings, Pegu still remained the residence of the Governor of Hanthawaddy.[3] By this time Syriam had become practically a foreign colony and experience had repeatedly proved that it lay too open to attack. The new town of Rangoon was

[1] H[illegible]story of Syriam. [2] Sittan.
[3] Symes, p. 172.

therefore established in its stead as chief port of the Empire The Governor of the thirty-two provinces of Hanthawaddy at Pegu was known to the British as Governor of Rangoon and his establishment was divided between both places. He presided over the public office ("Yôndaw") which included the Commissioner of Customs, one or two auditors, scribes and readers Subordinate to him and apparently members also of the office were the Inspector of Waters (Ye wun), Commandant (Sitkè) and Inspector of Shipping and Port Dues (Shabandar or Akaukwun[1]) The Governor of Syriam appears to have been subordinate to him but to have stood higher than the ordinary head of a township[2], the Governor of Dala was inferior in rank to the Governor of Hanthawaddy but independent. There was a host of minor officials, useful or ornamental, with various titles such as Penin, Sitkut, Yebaw and others too numerous to mention, charged with military or judicial administration or the collection of revenue, or merely with the regulation of ceremonies.

Of these the most important administratively were the Myothugyis, one at the head of each province or township. They were probably a survival of the Talaing administration and are of interest as representing the only approach to organization on hereditary, territorial lines[3] The Myothugyi was the connecting link between the people within the township, organised for the most part tribally or by occupation, and the external official hierarchy. "The heads over the Karens, the heads over the Yabeins the land agents, the heads over the elephants and over the buffaloes and over the horses . . . . . . distribute the demand and collect the revenue proportionately as among ears of corn that are long or short or trees that are small or high"[4]. The Myothugyi was charged with receiving the revenue from them and paying it over to the royal treasury. The fees and revenues of a township were sometimes alienated temporarily by the Crown as a mark of royal favour, or for service rendered, to individuals termed "Myosas", in this case the proportion of the revenue due to the Crown would be made over to them,[4] the local authorities deducting their

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[1] Sangermano, Chapter XI.

[2] History of Syriam.

[3] NOTE—even these did not appreciate the quasi-feudal nature of early British administration "it was found a matter of no small difficulty to make *thugyis* and others understand that they had jurisdiction over all residents in their territories", British Burma Gazetteer, Vol. II page 563.

[4] Sittan.

customary, share. Thus the distinguishing characteristic of the Burman administration of Hanthawaddy was its organisation on personal, not on territorial, lines.

The Sittans. There is considerable interest in the details of revenue collection given in the "Sittans" or surveys of 1784 and 1803. It is however, impossible to set down in brief space any general summary, as the system of collection and the details given vary from township to township; nor is it possible to draw any comparison except on points of detail between the results of the two surveys. The main heads of revenue were Land Revenue, Fishery Revenue and Poll Tax; brokerage dues and customs and octroi tolls also find mention. The land revenue unit in the case of rice land was the area which a pair of buffaloes could plough. It was assessed either in rice or in silver: in the record of one township it is mentioned that payment in money and not in kind was a recent innovation dating from the reign of Sinbyumyashin (1703—45); that this however was not universal is shown in another record where payment in kind in 1803 replaces payment in money in 1874. In the earlier year ten baskets of unhusked rice or two tolas of silver is the amount due on the unit area of land, twenty years later the demand on the same area had risen to fifty and in some parts to fifty-five baskets. The possession of buffaloes, however, was not essential to the payment of revenue, the number of yokes possessed may have been a useful means of gauging ability to pay, but many considerations combine to show that the land revenue shared the general characteristic of the fiscal system in being a personal impost rather than an area tax. On land other than rice land and on fruit trees the assessment was sometimes a proportion of the produce, more generally a definite sum in silver varying from two *mat* to two tolas in 1784, and from two *mat* to one tola in 1803. In the latter year there was a heavy tax of five tolas a head on the owners of betel gardens. Worthy of notice, too, is the ingenious graduation of the wood-oil tax in 1784, the workmen paying only one tola a head if they tapped the trees near the top, but two tolas if they adopted the more wasteful method of tapping near the bottom.

The fishery tax was also a charge per head; and here increasing graduation and differentiation are observable between 1784 and 1803. In the former year the only fishing taxed is that in the tanks, the workmen paying two to three tolas a head; in 1803 tank fishers pay five tolas a head, while those using a casting net pay one tola, and

those using a drag net two tolas. The salt-workers pay a small tax of one *mat* a head.

Minor sources of revenue were bees' wax and elephant tusks; the tax on these was paid either in money or in kind, the Karens of one village paying an annual tax of five viss of wax or two hundred and fifty viss of ivory or six tickals and one *mat* of silver.

The Karens and Yabeins had to pay a poll tax varying from nine to ten tolas of silver per household; this charge was not in reality so heavy as at first appears, as among these hill tribes a whole village occupied one long dwelling in common.

In the case of every tax the quality of the silver in which it had to be paid is carefully defined; pure silver, nine parts, or as the case may be. The proportion to be allotted to the various officials, local and central, engaged in collection is in some instances set down; and in some cases where grain is paid a charge is included on account of compensation for the grain eaten by the rats in the royal treasury.

The Myothugyi was also engaged on judicial duties and half the fees derived from the administration of justice had to be remitted to the central authorities. This also appears to have been the case in other courts besides that of the Myothugyis. It was recognised, moreover, that taxation for revenue only was an undue limitation of its possibilities, thus in some townships marriageable boys and girls neglecting their duty had to pay two pieces of flat copper wire.

British Administration. Personnel.

The British administration differed from that of Burman times in being not an intricate plexus of personal relations but a territorial hierarchy on a quasi-feudal basis; from that of the present day (1913, it was distinguished by the absence of functional differentiation; for a short time, in theory at any rate, the district officer was a man engaged in governing men and not, as is sometimes complained at present, an official interpreting regulations. But in the period between 1857 and 1867 at least eight different officers held charge of the district, and as one of them was twice appointed (with an interval of more than a year between his successive tenures) there were nine breaks in the personal continuity. Thus even before the stress of material development had been fully felt, the change of system is already definitely traceable and it is not surprising to find that in 1868 a complaint was made by the Deputy Commissioner that "the number and bulk of all our annual reports this year have been already doubled" [1].

[1] Annual Revenue Report, 1868-69.

Ten years earlier, however, there had been little cause for such complaints as in 1856 the number of letters written by the Deputy Commissioner, including formal papers such as covering letters and summonses to attend a jury was no more than 181.[1] At this time the district officer, his assistant commissioners and township officers ("myoôks") were all engaged in revenue, judicial and police administration. The myoôk had only minor judicial powers The Myothugyi, who corresponded to the circle thugyi of later days, had no judicial powers and from very early times tended to occupy himself solely in revenue collection. There were frequent endeavours to enforce his responsibility in other matters, and so late as 1882 the Deputy Commissioner was instructing them "that they are not only revenue officers but are to help the regular and rural police in keeping down crime"[2].

The myoôks and the thugyis were nominated by the Deputy Commissioner subject to the confirmation of the Commissioner. The necessary qualifications were "a good character and ability to read, write, cipher and measure land."[3]. The myoôk was paid a regular salary, the thugyi by commission. The *gaungs* were stationed in villages, but had no functions except police work and drew monthly pay. The *kyedangyis* were rural policemen ranking below the *gaungs* and were put in charge of subordinate hamlets The *kyedangyi* was "as a recompense for his trouble exempted from the payment of his capitation tax—a miserable salary for a police officer." The river police appear to have been a recent institution in 1855[4].

The establishment of Rangoon district other than the clerical staff consisted in 1855 of—

1 Deputy Commissioner
1 to 3 Assistant or Extra Assistant Commissioners.
15 Myoôks
60 Thugyis.
196 Gaungs.
30 Peons (two for each Myoôk).
6 river police-boat crews.

Out of these have gradually developed the whole district

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[1] District Letter Book, 1856.
[2] Order Book, 1882.
[3] Pegu Manual, 1861.
[4] District Letter Book, 1856.

staff of modern days—Judicial, Revenue, Police, Excise, Educational, Sanitary, Engineering, and so forth. They also contained the nucleus of other institutions, such as the Chief Court, which have ceased solely to concern the district. In 1861-62 a police establishment was formed and in the same year the district treasury was transferred to the Bank of Bengal.

Apparently a Judicial Deputy Commissioner to deal with civil work was already appointed in 1859, in the early sixties the formation of a Customs Department relieved the Deputy Commissioner of a portion of his duty; the Jail Department was organised prior to 1870, and in that year an Educational Department was established Thereafter successive partitions of the district and at the same time devolution of powers to subordinates were designed to relieve the officer in charge, and finally the work of the district increased so much that it was divided into the Syriam district and part of the Insein district in 1912

Area. As first constituted Rangoon district embraced the Burman Province of Dalla and the larger portion of the country known as the "Thirty-two Provinces of Hanthawaddy" to which the Island of Syriam had been attached. The two subdivisions roughly corresponded with these two tracts; there was the Dalla subdivision with headquarters at Twante and later at Yandoon, and the Pegu or Syriam subdivision with headquarters at one of these two places or sometimes in Rangoon Townships and circles appear and disappear with great rapidity: these are traced, so far as they are of importance for economic history and present administrative purposes, in Chapter XIV and the appendices In 1866 Bawni circle, a tract of 800 square miles, was transferred to Toungoo district; in 187[illegible] Thôngwa circle was transferred to Tharrawaddy, and in 1874 Kawliah circle passed to Shwegyin. In 1875 occurred the first partition of the district on a large scale when the Dalla subdivision (except Twante) passed to the newly created district of Thôngwa, in 1883 Pegu was carved out of Hanthawaddy and Shwegyin. In 1875 the town of Rangoon had been constituted a separate administrative unit and there have been subsequent encroachments as the urban area has extended In 1895, on the redistribution of Shwegyin district, the Kyauktan subdivision was restored to Hanthawaddy, making the area of the district 3,023 square miles; the original area was more than 10,000 square miles. The former and present day limits are set forth in the small scale map (Appendix I).

List of Deputy Commissioners.

The following list gives the names of some of the District Officers and the years (if known) in which they held charge:—

Sparks	1855—57
Fytche	...
Grant	...
Ardagh	1862-63
Faithful	1863—65
Captain Browne	1865
Ryan	1865-66
Faithful	1866-67
Lloyd	1867
Davies	1870—72
Spearman	1877
Hough	1882
Street	1883
Parrott	1884—86
Macrae	1889
Todd-Naylor	1898

Of these Colonel Ardagh is the only one who seems to have left his name among the people in general, and by this time, as is but natural, it is only a small minority of the older people who remember him. Macrae is remembered in one or two localities. The name of Captain Parrott is remembered as "Sammy Gyi" or "Than Min Gyi," but it was as Settlement Officer that he made the acquaintance of the people Here and there memories remain of a quasi-mythical "Tiger Lord"—it is understood that a reference is made to the last, the late Hon'ble H. P. Todd-Naylor.

Criminal and Civil Justice. District Codes.

For some years after the annexation broad principles of equity and common sense rather than nicely determined points of law formed the basis of judicial administration. Justice had not yet been confined in codes. There were no set forms of law, but the inconvenience of this was soon experienced and in 1856 the Deputy Commissioner points out that "the want of some definite rules for the guidance of subordinate officers is daily more and more felt"[1]. As there appeared "little probability of the legislature passing an Act for the administration of justice in Pegu for some time," he drew up a set of rules for the administration of Civil and Criminal Justice, which he submitted for approval. It was not until 1859 that general codes were issued for the whole province.

Until 1859 the Deputy Commissioner of the district exercised both civil and criminal jurisdiction, but in that year a Judicial Deputy Commissioner was appointed to Rangoon. In the

[1] District Letter Book, 1856.

amended rules of 1862, after the amalgamation of the three Burman provinces, he was given general jurisdiction over Europeans [1], but a few years later was replaced by the Recorder with jurisdiction within the limits of the town of Rangoon and an Appellate District Court, supervising civil work within the district. The Recorder loses all connection with the district when the town is separated from it in 1875, and the Appellate District Court subsequently becomes the District Court of Hanthawaddy. Similar differentiation of criminal and civil work was developing in the subordinate courts; in 1870 there were only fourteen officials engaged in civil administration, while there were nineteen exercising magisterial functions. Since the constitution of the various judicial services the administration of criminal and civil law throughout the district has been conducted mainly by different individuals. A detailed account of the various establishments of the administration in the present Insein district (1912) is given in Volume B, Part I.

Criminal Administration.

During the early years of the British occupation there were numerous outbreaks of the guerilla warfare termed dacoity and even more seriously sustained rebellions against the newly established power [2]. From 1853 to 1856 the inroads of Myat Htun, Shwe Ban and Gaung Gyi defied authority along the western border. They derived part of their strength from Twante, but their stronghold in Donabyu was just outside the Rangoon district. A levy of 700 Karens from the Twante neighbourhood gave assistance in suppressing them, but in 1858 a fisherman of Twante [3] once more rallied people round him for another attack upon the British. He was soon brought to account and another small rebellion on the Pegu side in 1862 [4] caused little serious trouble. From that time onwards there was no organised attempt on any considerable scale to subvert the ruling authority until the annexation of Upper Burma lent new life to discontent.

The report on criminal administration for 1855 is one of the oldest records of the district; the gradual pacification had progressed so far as to leave leisure for turning phrases: "Although crimes of the deepest dye are still not extirpated a reference to the annual comparative statement of heinous crime reported to have been committed during each of the three last years will show that they have greatly

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[1] Pegu Manual, 1865.
[2] Laurie: Burma
[3] British Burma Gazetteer, Vol. II, page 849.
[4] District Letter Book, 1862, July.

diminished, and especially that dacoity although it still exists has lost those features of persecution, cruelty and atrocity which it had acquired during the disorganisation of society during the war and retained for some time afterwards . . . . until the agitated and angry billows calmly and gradually subsided under the breadth of peace. [1]" The introduction is followed by an analysis of the psychology of murder "whether brooded over in dull misery" or "committed in the heat of insensate anger"; but the figures of comparative crime referred to in the introduction are not now forthcoming. In the body of the report there is however an analysis showing that out of a population of 1,75,185 there were only 1,264 people suspected of concern in the commission of offences; of these 1,084 were arrested and 628 convicted. It was thought that not many serious offences had been concealed, but in less weighty matters most of the complainants had followed "the immemorial custom of the people, settling their dispute by the arbitration of the village elders." The absence of a formal code was not without executive conveniences, and offences could be punished which would be difficult to specify and more difficult to prove under present condition of administration Under the heading 'State Offences" there is an entry telling how two inhabitants of a village near Rangoon returned home one day stating that the country had been entered by the Russians—evidently greatly interested in the issue of the Crimean War. A petty official arriving from Rangoon nipped the rumour in the bud, and arrested the two men; "the draft which they had drawn upon the credulity of the villagers was consequently dishonoured, they were sent to Rangoon where a short imprisonment taught them to keep a tighter rein upon their imagination"

There was no material increase in the volume of criminal work until the late sixties. For some time there was an actual decrease; in 1860 there were 28 dacoities, and 14 in the succeeding year, but in 1865 there were three only and in each of the next two years no more than two The total number of crimes reported also showed a diminution [2] from 1,264 in 1855 to 1,177 in 1864 and 1,084 in 1865

The number of appeals was disproportionately small; in 1856 there were only three over the whole district, the conviction being in two instances upheld. According to the annual report for 1865, however, there was "no doubt that a

(1) District Letter Book, 1856.
(2) Criminal Justice Report.

considerable number of crimes are concealed from the police" The dacoities rise from two in 1867 to twenty-one in 1868, but their further progress is best shown by a table —

Year.			Number of Dacoities.
1867	.	..	2
1868	.		21
1869	...	...	28
1870	...	..	26
1871	..	...	118
1872	..	...	6,
1873	.	...	34
1874	...	...	33
1875	...	...	38

In 1874 the dacoits who infested Mavinzaya circle killed Lieutenant-Colonel Hamilton, the Inspector-General of Police, who had come out against them in person.

Cattle-theft was also rife In 1871 there were 120 cases and in 1872 there were 295 The Burman population appears to have been chiefly responsible for this form of crime In early days Madrassis, although numerically insignificant, composed the majority of those brought before the courts at the headquarters of the district In 1870 there were only 2,707 Burmans tried in Rangoon town as compared with 3,042 Madrassis; in succeeding years, however, the number of Madrassis tried decreases, although it is still large considering their total number, and the number of Burmans increases In 1873 there were 2,740 tried in Rangoon and in 1874 there were 3,406. The outbreak of dacoity and theft follows immediately upon the increased production of [illegible] and the extension of cultivation, the demand for cattle and the consequent supply of stolen cattle is clearly shown in the statistics

Hitherto the procedure of the Burman magistracy had been 'regulated rather by their ideas of what is right and equitable, than by the codes.' Among [illegible] had been that of inducing them to take vigorous measures for the suppression of crime. But in 18[illegible] they were beginning to learn the necessity for avenging [illegible] upon the person, and they are reported [illegible] to have recognised 'that a fine is not a suitable punishment for all crimes.'[1] In 1879 and 1880 a further increase in the number of criminal trials reflects the disturbances in Upper Burma, but during the annexation when Lower Burma as a whole was disturbed,

[1] Annual Administration Report, 875.

Hanthawaddy remained comparatively quiet. This was ascribed to the personal influence of Captain Parrott, who had been first Subdivisional Officer, then for five years Settlement Officer within the district, and finally Deputy Commissioner at the time of the war with Thibaw The criminal statistics of later years exhibit no abnormal features. A classification of the crime from 1908 of Insein district (excluding Hlègu township) is given in Table XVII of Volume B. Table XVIII shows the work of the criminal courts for the same area.

Civil Administration.

There is no record of the work done by civil courts until 1864; in that year there were 1,397 original and 54 appellate cases, which next year increased to 1,478 and 85 respectively[1]. Even these few cases, however, attracted a superfluity of pleaders, and an examination held for the first time at the end of 1865 resulted in the number of third class pleaders being reduced from 82 to 32[1]. The working of the courts had not yet been moulded along the lines of regulation, and regrets are framed that the native judiciary should be "lacking in dignity of curial demeanour" This was a point, however, on which the native judges had their own opinion. According to the Burman custom there had been one subordinate to hear the evidence and another to record it, and frequent orders were found necessary to induce the judges to take down evidence in their own handwriting. The orders appear to have been not entirely without effect for one judge with his own idea of curial dignity hit upon an ingenious compromise. His procedure, however, was made the subject of appeal, "one of the grounds being that the son of the pleader for the plaintiff recorded the evidence of the plaintiff's witnesses." As the rice industry increased, and with it the value of property in land, litigation became more frequent. In 1879 it is reported that "land which a few years ago would have been abandoned as valueless is now the subject of keenly conducted litigation." In 1869 the number of cases reached a total of 7,791, a more than five-fold increase in five years, and in the following year it passed 10,000 It is still reported that[2] "the people is by no means prone to litigation" and that "annually more and more cases are settled by arbitration to avoid expenses in the courts." At the same time there are so few appeals as to justify the remark that "the Burmans display great confidence in their own judges," nor did they "exercise a

[1] Report on Civil Justice, 1865.
[2] Annual Administration Report, 1873—1875.

preference between native and English tribunals." The great increase at the beginning of the seventies is mainly due to growing litigation in Rangoon Town; but in the district there is also an increase as land becomes more valuable and the western theory of contract finds appreciation. Even within the last few years there have been great developments in the works of civil courts.

Statistics of civil justice for the Insein district excluding Hlègu township are given from the year 1901 in Table XIX, Volume B There has been a large increase in the number of suits instituted in the District Court and in their average value but not in those instituted in the subdivisional or township courts. Litigation seems to have reached a maximum in the period 1904—08 and this may be partly accounted for by the fact that there was a boom in land in the first decade of the present century.

Registration.

Facilities for the registration of documents were first afforded in 1862, the rules having been passed by the Commissioner of Pegu in the previous year [1]. Henceforward a registration office was to be established at every town within the district which was the headquarters of an Assistant or Extra Assistant Commissioner—the latter was the equivalent of the present "Myoôk." The effect of registration was to give priority to a registered document over one unregistered, and at the time when it was passed it was expected to modify the custom established by the revenue rules of 1855 of prohibiting redemption of land mortgaged with possession after twelve years' undisturbed enjoyment. The general ignorance of this rule had already in 1859 been touched upon by the District Court The people, however, did not in general avail themselves of the facilities afforded. Of recent years there has been a remarkable increase in registration in Hanthawaddy district as it existed just before the partition of 1912. There were only 884 deeds registered affecting immoveable property and 27 affecting moveable property in 1890, while ten years later there were 3,153 and 387 respectively, and less than five years later in 1904 there were 5,015 and 667 The fees increased from Rs. 2,383 in 1890 to Rs 30,372 in 1904. Since then non-officials have been appointed Assistant Registrars and a further increase has resulted.

Police Administration.

Prior to the advent of the British the police force had consisted of an undisciplined force of braves attached to the governors of the townships [2] The new adminis-

[1] Pegu Manual, 1865.
[2] B. B G., Vol. II, page 562.

tration retained the system of Township Officers, of whom there were 15 or possibly 16 at first, but reduced their followers to two a head. An inferior police establishment consisted of the 66 circle thugyis, 186 *gaungs* and the crews of [illegible] river police boats [1].

Immediately after the annexation the Township Officers were primarily policemen, but as conditions grew more settled their revenue and judicial functions became predominant. The circle thugyis likewise became peculiarly revenue officials, although attempts were made so late as 1882 to bring home to them their general responsibility [2]. There was supposed to be one *gaung* to every hundred houses, but owing to imperfect enumeration the actual number fell far short of this. They looked after one or more hamlets and in the latter case a *kyedangyi* was appointed to the charge of the lesser hamlet; in theory as the name implies he was the largest tax-payer, but as was only natural the influential man made use of his position to shirk an office without emolument or honour, and with many unpleasant duties.

The staff had been in part recruited from members of the Burman administration and these were not in every instance to be trusted. In 1855 the Myoôk of Angyi collected his revenue but went off to Upper Burma without paying it into the district treasury. Others had been imported from Moulmein or Arakan and in such cases difficulty was sometimes caused by failure to recognise as such a Government official. In the same year as the Angyi Myoôk absconded another official, a Myoôk of Bassein district, was sent up for trial on the charge of having fraudulently represented himself to be a Myothugyi, in Burman times an alternative style for his proper dignity. Besides this system of police based on the village as administrative unit there were the river-police, who manned six boats. A body of this nature had always existed in Burman times, but it was not apparently until 1855 that it was revived. It is of interest as foreshadowing the later system wherein the district—and not the village—was the unit.

Between its first establishment and the reorganisation in [illegible] there had been modifications of the district police. Just before it was remodelled the force consisted of—

(1) Assistant Commissioner, Extra Assistants, Myoôks, Thugyis and Peons.

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[1] District Letter Book, 1856.

[2] [illegible] Book, 1882.

(2) The Village Police (*gaungs* and *kyedangyis*).
(3) A detachment of the Pegu Light Infantry.
(4) The District Police.
(5) The Municipal Police.

The Pegu Light Infantry was a Burman Regiment raised by Colonel Fytche, who enrolled promising dacoits, a somewhat Burman expedient. The District Police included the river police and others attached to the district staff as distinct from the village organisation The Municipal Police were only to be found in Rangoon and Yandoon, possibly also Pegu; they were raised and paid by the municipal bodies.

Under the Police Act of 1861 a regular constabulary was organised with a staff of superintendent, of inspectors drawing Rs 100 to Rs. 150 a month, of head constables on Rs. 50 and sergeants on Rs. 20. There were three grades of constables drawing respectively Rs. 9, Rs. 10, and Rs 11.

In Rangoon district there were 350 constables, the crews of 12 boats and 80 *gaungs*. The last were appointed and removed by the Deputy Commissioner, but they were under the orders of the Superintendent of Police and attached to the police station; they thus lost their connection with the village staff. The Municipal Police were reconstituted as a portion of the district force The *kyedangyi* retained his position as a village official. He and the *gaung*, both within their respective charges, had to report and make inquiry into "murder, wounding, burglary, theft, tumultuous assemblage, affray and other heinous offences," and to apprehend people who committed such and also people of suspicious character without ostensible means of livelihood. He received no remuneration and difficulty is reported in inducing suitable people to accept the office. The new force was recruited from discharged Myoôks (the number of townships being reduced about this time from 15 or 16 to 8), from the Pegu Light Infantry and from the district police corps.

It was found in Rangoon District that the rates of pay did not attract men of a desirable type. In 1867 the police are reported to neglect excise administration, being themselves large consumers of opium. In one case a warrant had been issued charging a man with suspicion of bad livelihood; but he effected his escape and possibly his reformation by enlisting in the police [1]. Frequent outbreaks in the jail

[1] District Letter Book, 1867, No. 688.

led to the substitution of Indian for Burman warders, and shortly before 1870 a separate prison department was created. From the early seventies there had been comment upon the numerous resignations in the police, and this is still a difficulty in 1880. The outbreaks in connection with the annexation of Upper Burma led to a further introduction of Indian police. There are few other particulars of interest which Insein district does not share in common with the rest of Burma. As elsewhere the police of the district were assisted in excise administration by the formation of a separate excise department and shared in the benefits resulting from the enquiry of the Police Commission of 1906 by receiving an increase of staff with better rates of pay. A table showing the present strength and distribution of the police of Insein district is given in Volume B, Part I.

Reorganisation of the Village Police.

Meanwhile the village police had been reorganised. The *gaung* who had formed a link between the district and the rural administration was abolished in 1891 and the village headman took his place. The *kyedangyi* was replaced at the same time by the "ten-house *gaung*," who, like his predecessor, is purely a police official.

Local Administration.

The local administration is similar to that of other districts; certain local services are rendered out of revenue contributed from local sources. There is one Municipality—in the town of Insein—which is managed by the administrative district staff with the help of the experts in medicine and engineering and subordinate local officials, and the establishment is detailed in Volume B, Part I. An account of local self-government is, however, given in Chapter XI.

There are fifteen towns which have been notified under section (3) of the Lower Burma Towns and Village Lands Act, 1898, *viz.*, Insein, Hlawga, Hmawbi, Wanetchaung, Kanbe, Kamaynt, Thingangyun in the Insein township; Ledaunggan, Dabein and Hlègu in the Hlègu township; Palôn, Taikkyi, Thanatchaung and Paukkôn in the Taikkyi township; and Tantabin in the Tantabin township. These are described more fully in Chapter XIV and Volume B, Part I.

CHAPTER X.

REVENUE ADMINISTRATION.

Introductory.

The Revenue Administration of the Insein district before the British occupation in 1853 has been described in the previous chapter. It becomes so important from that date that it is convenient to discuss it under the heads Land

Revenue, Capitation Tax, etc The fluctuations of the revenue under these heads since 1906-07 for the Insein district excluding Hlègu township are shown in Table XII, Volume B The total revenue for 1906-07 and 1910-11 was lower than in the other years quoted on account of disastrous floods in the Tantabin township

Land Revenue Administration until 1860.

Clearly to comprehend the early history of the land revenue administration it is essential to bear in mind two points: firstly, that throughout almost the whole of the Hanthawaddy district there was no practical appreciation of the idea of property in land (see Chapter IV), and secondly, that taxation in Burmese times had been a personal impost (see Chapter IX), absolutely unconnected with the occupation of any particular area of land. On the British occupation land revenue became the most important item in the annual budget Acre rates were fixed and land taxed on the area under cultivation It is only natural that great difficulties were experienced on the introduction of this innovation A large proportion of the land was annually reported as abandoned, in one year it amounted to one-sixth of the land cultivated [1], while in one circle personal enquiry by the Deputy Commissioner showed that the abandonment reported between the years 1855-56 and 1860-61 was little more than ten per cent of that which had actually taken place At the same time there was a strong tendency for people to be assessed in their place of residence rather than in the place where they cultivated land (see Chapter IX) A special rule had to be laid down that land tax should be paid through the thugyi in whose circle the land was situated. [2]. There is therefore little reason to wonder at the annual complaints that yearly measurements were expensive and untrustworthy. In two successive years the revenue had to be remitted on 14,000 acres which had been assessed through erroneous over-measurement [3]

The uncertainty of the probable demand, the fluctuations, remissions and delays rendered it imperative that a more suitable method of collection should be introduced. Hence was devised the system of Settlement of Revenue by the issue of leases These leases gave a right to cultivate land on annual payment of a fixed sum regardless of the area cultivated. It was soon recognised however, that the "substitution of leases for a term of years for the annual

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[1] District Letter Book, 1862.
[2] Browne's Manual, 1861, Rev. Rule VIII.
[3] Annual Revenue Reports, 1861-62, 1862-63

measurement of land under cultivation"—would—"tend to confirm the feelings of proprietary right" which it was "desirable to encourage in the cultivator" [1] Hence from being merely a means of collection it came to be adopted as a policy of development.

The two problems.

With the introduction of the Lease System begins the differentiation along two lines of the problem facing the early revenue officials. It is recognised that there is an administrative problem, the development of the country, and a fiscal problem, that of ensuring for the State a due proportion of the increasing product. Hitherto development had only been encouraged indirectly by a moderate assessment of the land tax, and attention has been chiefly confined to its collection. In the words of Sir Arthur Phayre "Put low rates on land and people will go on increasing cultivation and new settlers be brought in." [2] The administration and the fiscal history will be separately considered.

The development of the country Summary of measures taken.

The security afforded by the British rule, the greater freedom of communication, the resulting rise in the price of rice and the increase in the population all contributed to multiply the area of cultivated land the incidence of the revenue, bearing more and more lightly as the price of rice rose, was another factor working in the same direction. Active measures, however, were taken by the State to encourage this natural tendency to increase of cultivation. The measures taken may be conveniently summarised under two heads:—

(*a*) those calculated to do so directly by encouraging cultivation;

(*b*) those calculated to do so indirectly by raising the value of land.

Under the former head there are included:—

(1) the Lease System, already mentioned;

(2) the Grant System, including—

(*a*) Waste Land Grants on a large scale,

(*b*) Small Grants or "pottas";

(3) the Fallow System,

(4) the System of Occupation Rights.

Under the latter head there are included.—

(1) the cheapening of labour by increasing its mobility,

(2) the cheapening of cattle and improvement in veterinary method, and

(3) the improvement of the crops, both in variety and quality.

[1] See File No. 142, 1862 (R. M., 47).
[2] Annual Revenue Report. 1865-66.

In early days the first essential of development is held to be the introduction and fostering of an idea of property in land; within twenty years the land hunger "positively amounts to greed." With the evolution of this stage earlier methods become adapted to qualitative development; more regard is paid to methods of production and there are systems heralding the introduction of restrictive legislation. No hard and fast line of separation can be drawn between the two periods; throughout attention has been paid both to obtaining the maximum of produce and to the manner in which it is to be obtained; naturally in early days it was concentrated on the former, at a later period upon the latter.

The Lease System. Early Settlements.

The first settlement of revenue by the issue of leases for a period of years was conducted by Captain Horace Browne in 1859-60; he was succeeded by Lieutenant MacMahon. The objects were.—

(1) "to fix rates per acre for the land tax payable to Government on moderately sized blocks of land".

(2) "to endeavour to obtain the acceptance of ten years leases"[1]

The "moderately sized blocks of land" were known as "pyengs" or "quengs" (*kwins*); it was anticipated that "the assessment by quengs and reduction of the rates on some of them" would "contribute to encourage additional land being taken up"[2] Captain Browne settled the revenue in ten villages on lands covering 5,337 acres. His successor in 1860-61 fixed rates for 457 cultivated and 54 uncultivated *kwins*, 1[illegible],70[illegible] acres in all[3], and in the following year extended his settlement over an additional 25,1/6 acres.

Both of these adopted the Village Lease System. "Village tracts comprising both cultivated and uncultivated but easily cultivable jungle were accurately defined and given over to the villagers to do as they liked without any restrictions or conditions other than the payment of a land rent equal to that on the then existing cultivated area"[4] In the following year a modification was introduced and the leases gave the villagers no exclusive right in uncultivated land to the detriment of the immigrants[4]. The principal inhabitants had to form a committee, but all were jointly responsible for payment. It was feared, however, that this village leases system might have a "retrograde tendency by shaking the feeling of proprietary right in land"[4]. It was

[1] Manuscript Records, Secretariat File No. 142, 1862.
[2] Annual Revenue Report, 1861-62.
[3] Manuscript Records, Secretariat File No. 159, 18[illegible].
[4] Annual Revenue Report, 1867-68.

found also that the system favoured the growth of "settlement *gaungs*" or "*kwin gaungs*" who obtained quasi-proprietary rights over land cultivated by other people, while the assessment was not equitably distributed amongst the joint lease-holders [2]. Individual leases had hitherto been possible [3] but had not been encouraged; as this consideration became predominant, however, the "Individual Farm Lease" was introduced [4]. This was a settlement with individuals of revenue for a certain number of years from three to ten. Certain land including the area cultivated by him was mapped and termed the "farm." On payment of the annual revenue he had exclusive rights of extending cultivation over the whole area within these limits.

This system did not prove popular as the area of extension was unduly limited. In 1865 Captain Lloyd introduced the Individual Lease, a modification which he had practised in Toungoo. The individual with whom the revenue was settled had the right to cultivate during the period of settlement any unoccupied land in the circle within which he resided [5]. Under this system the people evinced less reluctance to accept settlements and for two or three years more than 100,000 acres were settled annually. Most of them, however, were for the minimum period allowable, and although 313,312 acres [6] were under settlement in 1869-70 over 100,000 acres lapsed into annual assessment during the ensuing year [7]. By this time the importance of a more accurate survey was becoming recognised; it had been found that when the leases were "advantageous to the people they were unnecessarily disadvantageous to Government, and when beneficial to Government they often acted injuriously for the soil" [7] The system had failed to take any hold of the country and there were practically no applications [7] for renewal. The abolition of annual measurements with their attendant uncertainty and expense had been the common object of all the settlements [8], but nevertheless these had still to be conducted [9]. It was no longer necessary to encourage the idea of property and cultivation in some cases already encroached upon the village "upaza" [8] or residential area Thus Government ceased to encourage accept-

[1] Manuscript Records, Secretariat File No. 142. 1861
[2] Report of Committee on Settlements.
[3] Pegu Manual, 1865.
[4] Annual Revenue Report, 1867-68.
[5] Annual Revenue Report, 1867-68
[6] Annual Revenue Report, 1875-76.
[7] Annual Revenue Report, 1870-71
[8] Set. Rept., 1867-68.
[9] Annual Revenue Report, 1875-76, 1876-77.

ance of the leases and by 1874-75 only 1,416 acres of rice and garden land remained under settlement [1]. Meanwhile surveys had been in progress and in 1875-76 it was reported that as the result of the lease system "the people possessed large holdings which had never been returned in their names, and for which they had never been assessed. Small patches of these large areas, enclosed, were cultivated at pleasure by the people and only on such portions were they assessed in a kind of haphazard way" [1] It was also found that of the area surveyed during the year, nearly 100 000 acres, more than 25 per cent, remained unassessed It was therefore laid down that no more leases should be offered.

The Grant System.

The Grant System was a device to obtain the co-operation of capital in the development of the country, the Waste Land Grants were intended to attract the larger capitalist, the small grants to facilitate the spread of cultivation by men of lesser means. The small grants or "pottas" are of the earlier date, being provided for in the revenue rates of 1855 [2], but they do not attract attention until after the waste land grants are no longer available.

Waste Land Grants, 1861.

Rules for the grant of waste land in Pegu were issued in 1861 These contained penal clauses entailing resumption on failure to cultivate [3] Only seven grants were issued under these rules in Rangoon district, covering an area of 4,349 acres Simultaneously the question of attracting capital had drawn the attention of the Government of India, who passed a resolution advocating the sale and grant of waste land on easy terms. It was considered that there could "be no question of the substantial benefits both to India and England which must follow the establishment of settlers into districts hitherto unreclaimed . to direct such improvements as European capital, skill and enterprise can effect in the agriculture, communication and commerce of the surrounding country" [4] increased security of fixed property and comparative freedom from the interference of the local officers of the Government were also regarded as objectives In accordance with the terms of this resolution the former rules were abrogated in 1863 in favour of a system of Waste Land Sales

Waste Land Sales, 1863.

Grants were made the subject of auction sales at an upset price which varied from Re 1 to Rs 4 per 1,000 acres in Rangoon district,

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[1] Annual Revenue Report, 1875-76 1876-77
[2] Browne's Hand Book, 1861, page 6.
[3] Browne's Hand Book, page 30
[4] Pegu Manual, 1865

but was uniform throughout each township. There were no restrictions on development that was left to the enlightened interest of the grantee and no penalty was stipulated for failure to cultivate.

Waste Land Grants, 1865.

No capitalist came forward and in 1865 there was a reversion to the grant system; the grantee had to produce evidence of possessing capital, but there was no clause enforcing cultivation There was an immediate rush for land; before the end of the year 7,674 acres had been issued, mostly to Europeans and East Indians; while further application for more than 70,000 acres were registered. The grants under the former rules were also, except in one instance, exchanged for others under those of 1865. By the end of 1870 there had been issued 60 grants covering an area of over 80,000 acres and numerous applications were still pending Even before the promulgation of the more liberal rules of 1865 the local authorities had been representing that the whole system bore hardly on the cultivator and was unremunerative to Government. It was found that the grantees in general made no attempt to develop their estates, but used their position to harass the neighbouring cultivators, making them pay for firewood and for pasturage. Where a certain amount of land was brought under cultivation this was effected either by alienating small lots to holders without capital, or by enticing tenants of Government from the lands which they were already cultivating

An attempt was therefore made to distinguish between waste land and unoccupied lands; the former implying only those "available without present or future detriment to existing rights." In practice, however, this distinction was disregarded; for, as the Deputy Commissioner pointed out in 1868, there were on this interpretation no waste lands in the district; "during the Burmese rule the inhabitants had free access to all forest bordering their paddy land to cut firewood, cane, posts for their houses, etc. (not teak), without paying the Burmese Government any revenue . . . these rights have been granted away under the rules of 1865 to mere speculators, Government officials, Law advocates, clerks, members of the police, etc."

These difficulties were greatly increased by the inaccurate and often fraudulent surveying of their estates, and in 1871 the rules of 1863 for the sale of waste lands and the subsequent rules for making free grants thereof were abrogated. At that time 9,502 acres only were under cultivation on these estates, rather more than 10 per cent.

of the whole area granted. The greater portion of this cultivated area was on one of the few estates granted to Burmans At the time of cancelling the rules resurvey of the grants was authorised. This was considered desirable so as to deal with the fraud and carelessness which were known to have occurred in laying down their boundaries. The resurvey was carried out during 1878-79 and the outstanding disputes were settled by Captain Parrott at the first regular settlement.

The earliest revenue manual contains brief instructions concerning the issue of small grants of land, "pottas," free from revenue for a period of years The thugyi could grant up to five and the Deputy Commissioner up to a hundred acres. In those times the cultivator paid little regard to the title to his land; he was content to work it Hence it is not until the appetite for land had been stimulated by the boom of the period from 1865 to 1870 that the "potta" system attains prominence. In 1869, 5,000 acres previously exempted fell under cultivation and close on 4,000 acres of land were newly granted. Two years later the area falling under assessment was nearly double that in 1869 and by 1875 of 80,000 acres granted in the Pegu Division and not yet assessed to revenue by far the greater portion fell within Rangoon district

By this time, however, it had been noticed that the "potta" system was subject to defects similar to those arising from the waste land grants. The inferior officials were tempted to venality and laxity and those in higher positions were unable to devote the necessary time to superintendence. About 18-5 the Deputy Commissioner, Major Street, stopped the issue of "pottas" by thugyis on account of their misconduct and mismanagement, but this did not expedite disposal of the applications and in 1878-79 it proved impossible to grant more than 5,000 acres out of 50,000 acres for which applications had been made. Terms of exemption had become a matter of indifference; there was a rush for "pottas" as ten years earlier there had been a rush for waste land grants It was impossible to make any satisfactory enquiry into the status of the applicant and even so applications were too numerous to deal with. Prior to the separation of Pegu from Hanthawaddy nearly half the annual applications remained unsatisfied on account of the delay in issuing grants.[1] The subsequent disturbances diverted for a time attention from

[1] Annual Revenue Report, 1883-84.

the land question, but in the later nineties, the difficulties and delays again attracted the attention of the Deputy Commissioner, at that time Mr. Todd-Naylor. In Kyauktan Subdivision in particular there is reported to be "disgraceful neglect of survey and lack of attention to breaches in the conditions of the grants."[1]

It was hoped for a time that these might be surmounted by better organization, everything being "previously in train" so that the surveyors might "dash out directly the weather permitted them." These arrangements proved inadequate and in 1905 the "potta" system was suspended.

Fallow Lands. With land so lightly regarded as was the case during the few years after the occupation no one was willing to pay revenue on land which he did not actually cultivate. Colonel Ardagh in 1862 conceived the idea that the annual abandonment of land might be discouraged by levying a moderate rate, payment of which would evidence continuance of title over an area left uncultivated. He proposed, therefore, the imposition of a two-anna fallow rate, which he fixed on as one-eighth of the ordinary revenue.[2]

This suggestion was ultimately adopted, and in 1866 there were more than 0,500 acres of uncultivated land paying a fallow rate; in 1871-72 the area had risen to 14,000 acres. By this time a constructive interpretation of fallow was no longer necessary, and in the ensuing year an endeavour was made to see that no land received the benefit of the lighter rate which was not lying fallow in the ordinary signification of the term. The area immediately dropped from 14,000 acres to 757. During the next few years the area varies as the interpretation is more or less severe, and in 1874-75 there are complaints that the people—not unnaturally—find some difficulty in ascertaining its significance. In 1879-80 a common practice of paying fallow rates on land with the object of retaining title is reported and deplored, while a year later the origin of the fallow system is so little understood that it is supposed to have arisen from "the frequency of disputes among cultivators about the ownership of land, the two-anna rate was therefore fixed to preserve for the cultivator his right of possession." This it will be noticed is an exact inversion of the true sequence of cause and effect.

But by this time the fallowing of land had become an obsolete practice.[3] Nevertheless of nominal fallow there

[1] District Correspondence File, 1896, Land.
[2] District Letter Book, 1862.
[3] Settlement Report, 1879-80.

continue to be large annual increases; in 1883-84 nearly 3,000 acres are shown as fallow, in 1884-85, 38,000, and next year over 40,000. The reason assigned for the increase is that the holdings are larger than the cultivators can work; but it is more probable that the land was waste land occupied by speculators. The administration was therefore modified so as to preclude all but those actually cultivating their own lands as a means of livelihood from enjoying the benefit of the lower rate. Thus a system originated in the desire to increase development as rapidly as possible becomes adapted to qualitative development in the direction of creating a peasant proprietary. Nothing is on record, however, to show its success as a tactical expedient of this nature.

Occupation Rights.

The method of development by permitting the easy accrual of occupation rights is that deriving most directly from the previous régime, but the necessity for discouraging the abandonment of land led to the introduction of measures making it difficult for anyone to become dispossessed of land on which he had once entered, or without actually entering, paid revenue. Unless a cultivator reported formally to the thugyi of his circle his intention to abandon the land on which he was assessed he remained liable to the payment of revenue on it in full whether he cultivated it or not; if land revenue was paid for twelve years the right of occupation did not determine during the next twelve years; if a mortgage remained in possession for twelve years he obtained an absolute title; if, however, the occupation was not continuous to twelve years the ownership lapsed whether the land was formally or casually abandoned.[1]

It was thought for a time that thus to put a premium on long continued occupation would be a sufficient check against abandonment. This, however, proved not to be the case and other measures occupied the attention of the district officials, except, therefore, for a brief period when they were being defined for the Revenue Act of 1907, occupation rights do not bulk so prominently in the revenue reports as might be expected from their importance as a factor in development. The greater proportion of the land has been brought under cultivation by people who had no other right than that of occupation, but it proceeded with the silent regularity of a natural process until increasing limitations on the area available rendered it necessary to take precautions as to the accrual of further rights. As a

[1] Revenue Rules, 1855. Browne's Hand Book, 1861

result of this it was declared in 1907 that occupancy rights should not be allowed to accrue over certain areas. Two such areas were formed in Insein district, the "special permit area" and the "special lease area" with a view to prevent private ownership of lands which from their proximity to Rangoon were likely to become valuable or from their position were needed as grazing grounds, cattle paths, etc. In the former "occupation by squatters is generally prohibited, but permission to squat may in a few special instances be granted." In the latter "no occupation of available land by squatters is permitted but occupation under lease is fostered and encouraged." The former lies chiefly in Insein township, the south of Tantabin township and in Taikkyi township along the railway line; the latter comprises the central portion of Insein township and all the land in the district lying within about five to seven miles from the border of Rangoon Town. The leases are either Industrial, for which a revenue of Rs. 30 an acre must usually be paid, or Agricultural for which the annual demand consists of the ordinary revenue.

Indirect measures of development. The measures taken by the State for the improvement of agriculture form an essential part of that branch of land revenue administration concerned with the development of the natural resources of the district. During the years succeeding the occupation labour was scarce and expensive; the live-stock consisted only of buffaloes, and these were few in number and the ravages of murrain are annually deplored; while the crops suffered extensive damage from blight, insects and wild animals such as elephant, pig, deer and perhaps more particularly from rats.[2] Moreover, as rice was the only crop for which a market had been organised other crops were neglected. The first record of attempts

Improvement of agriculture. to improve agricultural methods occurs in connection with the settlement of 1859[3], when Captain Browne's commendation of Siam cultivators leads to the suggestion for the establishment of agricultural shows. For many years the advantages of these compared with model farms form a subject of discussion. In 1862 tobacco seeds are distributed, the cultivation of cotton, jute, indigo and sessamum is encouraged and a few years later a "Karen potato," apparently the yam ("Kazun-u"), is introduced and a new

[1] See Mr. C. M. Webb's Report on the Suspension of Grants in the Hanthawaddy district.

[2] Settlement Report, Rangoon district, 1867-68.

[3] Manuscript Correspondence, Secretariat Records, 1861.

variety of rice is imported from Arracan for planting in flooded areas. In 1864 the experiments are centralised by the formation in Rangoon of the Agri-Horticultural Society, which however subsequently developed a long line of less immediate economic importance to the district.

In 1861 a grant was made of nearly 500 acres for the institution of a model farm. The grantee, however, erected a rice mill. During the seventies the debate continues between the comparative merits of agricultural shows and model farms[1], and about 1880 a farm was opened at Kyauktan. This promised well, but it was subsequently found that the soil was poor and after three or four years the experiment ended.[2] Attempts were also made to[2] introduce machinery for ploughing and threshing, and experiments were made with different kinds of ploughs.

Veterinary improvements. In the early days particular mention is made of the cultivator's knowledge of the advantages of segregation as a preventive against the spread of cattle disease. Nevertheless the loss of cattle is annually deplored. For instance in one circle, Dawbôn, the area of cultivated land falls from 25,831 acres in 1864 to 12,543 acres in 1865, the decrease being assigned to inability to cultivate consequent on cattle disease. This did not, however, spread to the adjacent circles,[3] but the immigrants attracted by the rice-trade were unskilled in the management of buffaloes and unused to the surroundings of the delta, hence there was an increasing loss of cattle, which led to proposals for the institution of cattle-rearing establishments in connection with model farms and for the import of cattle to be sold at cost price to the cultivator.[4] In 1874 a veterinary school was established,[5] but it achieved little towards restoring the former tradition of cattle management; and four years later the people of the district are said "to make no attempt to separate the healthy animals from the unhealthy, leaving both of them to take their chance.[6]"

Supply of labour. So long, however, as labour was scarce and expensive, it was impossible for development to proceed with due rapidity. This was recognized from the first and steps were taken by the remission of taxation to attract immigrants. Upper Burmans flocked over annually for the harvest, but

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[1] Annual Revenue Reports, 1870-71, 1874-75.

[2] Annual Revenue Reports, 1883-84, 1884-85.

[3] District Letter Book, 1862.

[4] Annual Revenue Reports, 1870-71.

[5] Annual Revenue Reports, 1874-75.

[6] Annual Revenue Reports, 1878-79.

few came to settle, and those who did so stayed mostly in Rangoon Town.[1] It was estimated that for the five years from 1858 to 1862 there were 1,500 immigrants who settled within the district.

With the development of the rice industry, however, consequent on the opening of the Suez Canal the question of attracting an adequate supply of labour became more important. In the early seventies proposals were mooted which resulted in 1870 in the passing of a Labour Law, under which coolies were imported mainly into Rangoon district, but the protective provisions designed to regulate immigrants under State control were found liable to hamper free emigration. It became obsolete and in 1883 was repealed. When the Act of 1870 proved a failure the alternative was adopted of subsidising immigrants and with such success that the immigrants into Rangoon who had numbered 16,000 in 1877-78 totalled nearly 40,000 in 1881-82 and over 80,000 in 1883-84. The subsidy was then withdrawn

Results of measures taken for development.

It is not possible to determine the comparative effect of these various measures for the development of the resources of the district, but the general results may be summarised. The repeated political disturbances and the prohibition against exporting rice discouraged the spread of cultivation during the last years of Burman rule, one authority states that the area under rice in the district had not exceeded 50,000 acres prior to the British occupation, there is reason, however, for regarding this as an under-estimate. The figures in the subjoined table show the expansion of cultivation reported during the first five years for which records are available.—

Year.	Acreage reported under cultivation
1853-54	68,056
1854-55	103,678
1855-56	152,523
1856-57	209,273
1857-58	237,183

For the next year or two there was a decline; the rapid increase and subsequent temporary stagnation seem to reflect the gradual resumption of normal conditions and greater accuracy in obtaining information rather than the result of a stimulus afforded by the British occupation. The next period of advance is contemporaneous with the inception of the Lease and Waste Land systems. From 263,425 acres in 1860 the area cultivated increases to 371,109 in 1867—an average of 15,000 acres a year. Then again there

[1] Annual Revenue Reports, 1865-66.

is a diminution in the rate of expansion and for the next four years it averages only 7,000, so that in 1870 there were rather less than 400,000 acres under cultivation.

In this year commences the boom in rice which accompanied the opening of the Suez Canal in 1869. There were only two rice-mills in Rangoon in 1867, and by 1872 they had increased to seventeen[1]. The area under cultivation rises by increments of about 30,000 acres until in 1874 more land was newly assessed to revenue than had been assessed over the whole district twenty years before, and the year after half as much again was added. These are the first two years in which it was possible for the Suez Canal to act as an effectual incentive to the spread of cultivation.

Year.				Acreage reported under cultivation.
1870	...	.	...	397,000
1871	...	.	..	443,960
1872	..	.	...	472,087
1873	..	..	..	500,663
1874	...	...	..	577,833
1875	.	...	..	673,619

In 1876, however, 70,000 acres were assigned to the new district of Thòngwa, leaving 630,433 acres under culivation in Rangoon district. Nevertheless the rate of increase continued unchecked. To some extent the annual increment is not accurately reflected in the figures. For instance, some of the more striking increases during the middle seventies had been partly due to greater accuracy in survey; this is also the case towards the close of the next period when Captain Parrott was engaged in conducting the first regular settlement. It is probable, therefore, that the annual average increase was more regularly distributed than the figures would suggest, between the reorganisation of 1876 when part of Rangoon district went to Thôngwa and that of 1883 when the remaining area was almost equally divided between Pegu and Hanthawaddy, the average annual

[1] Annual Administration Report, 1871-72.

increase of cultivation amounted to 50,000 acres.

Year.	Acreage under cultivation.
1876	630,433
1877	668,131
1878	701,804
1879	754,264
1880	802,629
1881	873,246
1882	930,876
1883	977,321

After the cultivating season of 1882-83 Hanthawaddy was left as the representative of the old Rangoon district; the total area, however, was less than half what it had originally been, and the average area under cultivation was only 378,390. Cultivation still continued to increase rapidly; for ten years there was an annual average increment of 20,000 acres and in 1893-94 the cultivated area amounted to 560,770 acres. Two years later a readjustment of the district boundaries resulted in the reincorporation of Kyauktan subdivision and the cultivated area rose at a bound from 567,578 acres to 957,928; subsequently there has been a nearly steady increase. The cultivated area of Hanthawaddy district [1] as it existed just before the partition of 1912 amounted in 1910-11 to close on 1,200,000 acres (see Table IV, Volume B). The area under cultivation of crops other than rice has always been, and is still, comparatively insignificant. It is not until 1855-56 that there are figures showing the area thus cultivated In that year there were 5,080 acres and 13,069 in 1860 It is for the latter year that information is first obtainable as to the revenue derived from this source. It then amounted to Rs 9,251. For a few years there was a setback and then in 1868 the revenue derived from this head suddenly rises to over Rs. 40,000. For two years or more it fluctuates between 50,000 to 70,000 and then again there is a rise, nearly a lakh being the annual yield just before the separation of Pegu.

Collection of the Revenue.

There are no records available as to the means of arriving at the rates of land revenue imposed during the first few years of the British occupation. The Burman system of a charge per yoke of cattle was superseded by the acre rate which in the Tenasserim Province had been introduced a few years previously. The rates appear to have varied from Re. 1 to Rs. 2 per acre, but to have been uniform throughout each circle. The thugyi of the circle had to collect the revenue, the people being assessed according

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[1] *Cf.* pages 74, 75 for Insein district.

to their place of residence. The acreage can only have been a rough approximation, and many considerations justify the opinion that, despite the nominal collection of land revenue, the Burman system of personal assessment was only gradually superseded.

Land surveyors from Arakan were introduced, but there are annual complaints of their dishonesty and incompetence; so measures were taken to induce thugyis to qualify in land surveying, and in 1862 there were fifteen who were either competent themselves to conduct the yearly measurements or had relations who could take their place Surveyors, however, had still to be hired at Re. 1 an acre in fifty-five of the circles and in the same year therefore a school was opened in the district to give instruction in surveying, the attendance being largely recruited from Karens.

The First Settlement. Captain Browne and Lieut. McMahon.

The first modification of this system was the substitution of the *kwin* (*pyeng* or *queng*) for the circle as the unit area of uniform assessment. The *kwin* was an area sufficiently uniform and of so moderate a size as to admit the imposition of a single rate over the whole area The rates henceforward varied according to the fertility, situations, local prices and facilities for marketing. They were nominally the money equivalent of one-fifth of the gross produce, which in the larger *kwins* of 200 to 300 acres was determined by five or six selections of about one-eighth of an acre each.

It was anticipated that the rate per acre would on an average be raised by 12½ per cent. and moreover that the "breaking up into *kwins* and reduction of the rate in some of them" would raise the revenue by encouraging cultivation. The division of the country into *kwins* was one of the main objects of the early settlements. The other object, from a fiscal point of view, was to facilitate collection by inducing the cultivators to accept leases of their land for a fixed sum to be paid annually during the period of the lease There was also an attempt to encourage biennial payments but this failed. The fixing of the rates was the practical issue of the settlements of Captain Browne in 1859 and Lieutenant MacMahon in 1860; they appear to have varied from As. 8 to Rs. 2-8-0, rising by increments of four annas. In no instance do they seem to have approached the theoretical limit of one-fifth of the value of the gross produce.

The Second Settlement. Captain

The next series of settlement operations took place between the years 1865 and 1868. With regard to fiscal administration they were only important as attempts to improve the methods of collection; there was no readjust-

ment of the rates nor was the country resurveyed. The sole object in conducting them was to introduce the system of individual leases which has already been described (*see* page 128); it was hoped that they would obviate the necessity for annual survey and thereby steady the revenue demand; hitherto this had fluctuated not only with the area under cultivation but with the incompetence, dishonesty and laziness of individual surveyors over whom no effective check was possible. For instance in 1864 and 1865, although the returns for most townships showed a moderate increase in the area under cultivation in two townships, no variations whatever are reported. Owing, however, to the rapid spread of cultivation annual surveys continued to be necessary, and in 1869 a new system was devised aud introduced. Since Lieutenant McMahon had completed the operations initiated by Captain Browne survey had been independent of settlement and had been conducted through the agency of the thugyis apparently on the basis of the maps prepared by these two officers. It was now determined to institute a Revenue Settlement Department which should be responsible both for survey and settlement, the latter term comprehending both the issue of leases to individual landholders for a period of years and also, where necessary, a readjustment of the rates. Captain Fitzroy was appointed Senior Settlement Officer. He examined the rates in three townships—Syriam, Pegu and one other, probably Dawbôn—and found them to vary from six annas to two rupees four annas per acre These represented so small a proportion of the produce that in no case was it necessary to lower them while the survey was in the great majority of cases so inaccurate that it was inadvisable to raise them, the rates therefore remained unaltered. He surveyed 1,858 holdings with an approximate area of 46,450 acres, or 25 acres to the holding, but over 80 per cent. of the cultivators refused to renew their leases and the greater part even of those who accepted a renewal were deceived into so doing by wrong inducements made by one of his assistants.

Period 1869 to '879.

The whole system had already broken down in practice; the machinery of survey was inadequate, the leases were unpopular with the cultivators and unremunerative to the State, the profits of cultivation were rising rapidly and no method had been devised for corresponding readjustment of the rates and settlement operations were expensive to conduct and practically barren of result. Captain Fitzroy proposed a more elaborate method of annual survey by a trained establishment with a unit of five-acre plots shown on

a scale of 20 inches to a mile. This suggestion obtained the approval of Sir Albert Fytche, then Chief Commissioner, but his successor Sir Ashley Eden decided that such detailed accuracy was as yet unnecessary and in 1872 accepted the recommendation of a committee of the most experienced revenue officers in the province that the former system should continue, modified however by the introduction of a regular quinquennial survey. Although, therefore, the settlement of revenue by the issue of leases continued in theory to be a duty of a settlement officer, in fact he was concerned with nothing beyond survey. Captain Fitzroy "being wedded to his own scheme and impressed . . . . with its being the only possible effective system" reverted to military duty but was before long recalled and placed in charge of operations. In one year survey revealed that in some *kwins* half the cultivated land was unassessed to revenue. In 1874-75 the area surveyed amounted to 90,000 acres showing an increase of nearly 50 per cent. upon the area returned as cultivated by the thugyis. In 1875-76 the survey of more than 100,000 acres showed a deficiency of 16 per cent. in the previous returns. The accuracy of these surveys is repeatedly eulogised by Captain Parrott in his report of the first regular settlement. By 1876 it was admitted that the deficiencies were due rather to the inadequacy of the system than to individual delinquencies; the lease system had also been abandoned and henceforward the Settlement Department in Rangoon district was only employed in the survey of fisheries. About 1879 cadastral survey on the basis of the field as unit was introduced as a preliminary to the first regular settlement on modern lines.

The First Regular Settlement Captain Parrott, 1879 to 1884.

This settlement was conducted by Captain Parrott in the years 1879 –84. The rates, however, had remained unaltered since the early sixties when they had been calculated on the theory that the State was entitled to one-fifth of the gross profits. At the time when settlement operations were initiated the share of the State had not been finally determined; ultimately it was decided that the theoretical maximum should be one-half of the value of the net profits, *i.e.*, of the produce remaining after deducting from the gross yield the cost of cultivation and living. This proportion did not differ materially from that taken on the former assumption that one-fifth of the value of the gross produce was due as revenue to the State. Although the actual ratio had not been definitely settled it was certain that a substantial enhancement would accrue, and to avoid the appearance of oppression consequent upon a large and sudden increase a

preliminary enhancement of 25 per cent was ordered in 1880 The soil was graded in various classes according to fertility and the district distributed into different areas according to the facilities for disposal of the produce. The rates arrived at varied between twelve annas and three rupees eight annas, they were supposed to represent the value of over one-third but less than one-half of the net profits.

As a result of these settlements the land revenue was enhanced by about Rs. 2,50,000; but as the district was subdivided during the course of the settlement the actual increase in Hanthawaddy was only about Rs. 1,50,000. This enhancement was chiefly due to the increase shown in the cultivated area by more accurate survey, the thugyis having neglected to keep pace with the spread of cultivation since the surveys by Captain Fitzroy's party in the middle of the seventies. In round numbers 100,000 acres were added to the area previously shown as being under cultivation in Hanthawaddy district. Practically the whole increase was derived from the deltaic portions of the district south of Rangoon. North and west of the town the country is hilly in some localities, and in others liable to inundation, hence the existing rates had in certain neighbourhoods to be reduced and in the year 1881-82 when the present Twante subdivision of Syriam district and the Kyaukchaung circle of Hmawbi township of the present Insein district were brought under settlement there was effected a reduction of the annual demand by over twenty thousand rupees.

Several causes, of which probably the most important was the famine in Bengal, had combined to raise the price of unhusked rice in 1878 and 1879 During the year 1880-81 it fell by 13 per cent. Despite the moderation of the enhanced rates it was represented that, taken together with the increase of area due to more accurate survey, they pressed unduly on the people. The abolition of the favourable rate on land left fallow had coincided with the settlement. There was at this time practically no land left fallow in the ordinary course of husbandry, but the regulation affected the pockets of those who bought uncultivated land with a view to selling it at a future date. A powerfully backed petition based on the twofold considerations of a fall in price and the abolition of the privilege of fallow resulted in a diminution of the rate on the lands which had been assessed most highly. The settlement reports of Captain Parrott are full of information of economic and historic value.

1880 to 1897.

Since the conclusion of the regular settlement the revenue has been assessed in the ordinary manner on the basis of maps prepared by trained surveyors, who have, in theory if not in practice, annually brought up to date the maps furnished by the Settlement Department. It has however proved necessary to supplement these men from time to time by special survey establishments. In the course of the nineties the introduction of the village system paved the way for the disappearance of the circle thugyi (headman) in favour of the headmen of villages who now collect the revenue in those circles where the change has been effected. In the circles of which a thugyi is still in charge the revenue surveyor is his assistant and is appointed by him; in the others the revenue surveyor is a subordinate of the Land Records Department of the district.

The First Revision Settlement.

The settlement was revised by Mr. McKerron between 1897 and 1900; the imposition of the new rates was again preceded by an enhancement of 25 per cent. over part of the district. The proportion of the yield due to the State which had been assumed in 1860 to be one-fifth of the value of the gross produce and in 1880 one-half of the value of the net profit, was now taken as one-quarter of the value of the net produce remaining after deducting from the gross produce the cost of cultivation only. The area dealt with amounted to over 2,000 square miles and included little less than a million acres of cultivated land. A different tract was dealt with each year and in the first the settlement officer had to fix the rates on over 140,000 acres of cultivated land. It was therefore possible to do little more than readjust the rates, and although there had been great local variations in the fertility of the soil practically no reclassification could be attempted. Greater minuteness, however, was effected in adjustment of the rates by grouping similar *kwins* in fertility tracts based on the original soil classification. After this revision the rates ranged between Rs. 4-8 and Rs. 1-8. According to theoretical calculation of the profits based on the statistics then collected they rarely touched the permissible limit of one quarter of the value of the net produce and in some cases were considerably lower than this proportion. The resulting increase of revenue amounted to rather more than Rs. 076,000 and the enhancement was again heaviest in the deltaic tract where it reached 40 per cent. of the previous demand. In the northern townships the enhancement of revenue was no more than 13 per cent. Since the first revision there have been no administrative changes of importance except the gradual

supersession of circle thugyis by village headmen as revenue collectors.

Second Revision Settlement.

The second revision settlement in the Insein District was carried out by Mr. Morrison in 1910—12. The share due to the State was again taken to be a quarter of the value of the net produce, *i.e.*, the value of the crop less the cost of its production. The cost of living was not deducted before taking the quarter. The whole of the Insein district except Hlegu Township was dealt with and re-classified. The rates proposed were raised by the Local Government and the financial result was an increase of about 30 per cent. The new rates took effect from the 1st of July 1913 and will remain in force for twenty years. The increase in revenue was derived chiefly from the parts of the Hlaing valley which are not subject to floods.

Table XIII, Volume B, shows the slow growth of the land revenue from 1901-02 in Hanthawaddy district as it existed just before the partition of 1912. The floods of 1902, 1903, 1904, 1905, 1906, 1909 and 1910 mostly account for the variations in the remissions.

Personal taxation. Capitation-tax.

In Burman times a poll tax or family tax had always been imposed on subject races like the Karens and the Yabeins and even the revenue paid by the Burmans and Talaings had partaken of the nature of a personal impost. The Company on assuming charge of its new territories found it convenient to continue the system, and they imposed a capitation tax. They continued, however, for some years anxiously to consider its incidence lest it might prove a drag on the development of the country The rates at first imposed were lenient and they were only raised by gradual degrees as the district proved its ability to bear them. Caution was the more necessary as the impost was regarded as a tentative measure to be abolished as other resources become increasingly productive. The first assessment is uncertain, but by 1860 two rates had become established—Rs. 4 and Rs 2 per married man—the lower rate being paid in the less developed areas. Half this amount was paid by bachelors The rate of Rs. 4 was raised to Rs. 5 in towns, but it was replaced about 1862 by a "Land Rate in lieu of Capitation tax, Europeans and many settlers from India objecting to a poll tax." Between 1860 and 1865 the rate was raised to Rs. 5 in the interior: the actual year in which the alteration was effected seems to have been 1862, the Deputy Commissioner having in the previous year suggested it as a suitable alternative for the extension of income tax. The area paying at the lower

rate was also, as time went on, restricted, and in 1865 the full assessment was everywhere imposed except in portions of the circles of Htandawgyi, Pôngyi, Thônzè and Ôkkan. The rate was subsequently raised in 1870 to Rs. 5 throughout the district.

Exemption. In order to minimise any prejudicial effect which the imposition of capitation tax might have on the course of development, measures were taken from the earliest days to exempt immigrants from payment. It was hoped that exemption might encourage the permanent settlement of "Burmese lads who flock over here at harvest time to earn a few rupees and go back again." There were difficulties, however, as regards granting exemption, and in 1861 "not a single settler was exempted." Increase to the revenue thus resulting from new settlers was regarded as "especially pernicious.................It postpones indefinitely the future prosperity of the country." Thenceforward exemption passes annually issued; for the first few years they number about 250 rising to 500 at the end of the decade, but again in 1874 failure to issue exemption passes during the previous year is alleged as the cause of an apparent decline in the receipts on resumption of the practice. At the end of the seventies there is another rise in the statistics of immigration. Subsequently the period of exemption was restricted to two years instead of five, and since the annexation of Upper Burma the beneficiaries have been, in Insein district, mostly natives of India. This exemption, however, has been due rather to negligent assessment than to intentional omission with a view to encourage immigration. In 1905, for example, no instances were recorded of exemption on this account. At present (1912) the annual average number of people exempted is about 4,700 some escaping on the ground of old age and poverty (usually the former); many of the exempted are monks.

Collection. The capitation tax was always collected by circle *thugyis*, until the appointment of village headmen, who have since collected it in those circles where thugyiships have been abolished. Rupees 1,68,950 was the demand for Rangoon district in 1855, the first year for which figures are available, and this had increased by 1860 to Rs. 2,06,501, of which Rs. 23,528 was paid in Rangoon Town alone. During the two succeeding years the increase in the demand reflects the rise in the population, and in 1863 the incidence over the whole district outside Rangoon Town rises to more than Re. 1 per head of the estimated population. This was the first year in which the collections in Rangoon district had

exceeded those in Bassein, for although it was "the most advancing district in the province," owing to the laxity of capitation tax administration, "this had not hitherto been observable in the returns" In the same year capitation tax ceased to be collected in Rangoon Town, a land rate being introduced instead. The amount collected rose until 1875 when it reached Rs. 4,23,598, and there was also a slight rise in the incidence per head, indicative presumably of juster accommodation in the machinery of collection. Thôngwa was then separated from Rangoon, reducing the assessment to Rs. 3,31,708, but there was a resumption of steady growth and by the time that the district was again divided in 1883 nearly Rs. 4,00,000 was collected annually. This sum was almost exactly halved after the division had been effected, but since then there has been again a rapid growth, the collection for 1895 prior to the absorption of Kyauktan reaching Rs. 2,43,395 and for the succeeding year Rs 3,67,472.

Statistics of capitation tax for Insein district excluding Hlègu township from 1906-07 are given in Tables XII and XIII, Volume B. There has been an almost steady increase of assessees, no doubt due to the increase in population, and the collections would have increased correspondingly if large remissions, due to floods, had not been given in 1906-07, 1907-08 and 1910-11.

Difficulties of collection.

In the early eighties a tendency is noticed towards increasing difficulties of collection; special mention also is made of the comparative neglect to assess and collect dues from natives of India. This latter feature becomes more and more noticeable, but within the last few years great success had been achieved by appointing Indian officials to collect the tax from alien residents. In the year 1906-07 almost all the increase in revenue was due to stringency in the collection of the tax from Indian coolies.

Substitute for Capitation tax.

While Burmans have been assessed to capitation tax various expedients have been adopted for imposing equivalent taxation on the members of other communities. Of these the land rate was the earliest and has proved the most enduring. It was a tax imposed upon ground covered by buildings in towns where there resided numerous non-Burmans. It was levied in Rangoon, Twante (Dala), Yandoon and Pegu in the early sixties; on the introduction of income tax it was lowered by one-half, but in 1865 it was again raised to three-quarters of the original rates as one of the methods adopted in compensation for the loss of revenue caused by the abolition of income tax. In 1864-65, the

year before raising the rates, the demand amounted to Rs. 23,684 and in the subsequent year to Rs 41,745. When Yandoon, Pegu and Rangoon passed in succession under separate administration the income from this source diminished. In Twante also the land rate was replaced by capitation tax It does not form an item in the revenue of the Insein district.

Income tax.

Income tax was introduced in 1860 and all incomes over Rs. 200 became liable to taxation except those of officers in the Army and Public Works Department In the first year the demand in the Rangoon Town amounted to just under Rs. 75,000, but Rs. 10,000 had to be remitted and nearly Rs. 2,000 more apparently could not be recovered. It was also levied in Yandoon, Twante and Pegu, the collections amounting to Rs 2,920, Rs. 226 and Rs. 1,592 respectively. Incomes below Rs 500 were treated more leniently than those exceeding that limit, and in the next year a glimpse of the distribution of income in the district is possible from returns which show the amount collected at the two different rates Incomes below Rs 500 paid Rs 3,401 in Yandoon, Rs 223 in Twante, and Rs 1,154 in Pegu, while those above Rs. 500 only paid Rs. 80 in Yandoon and Rs. 99 in Pegu After this year incomes below Rs 500 escaped taxation, and the residents in those smaller towns paid capitation tax at Rs. 5 instead of Rs 4 as in the surrounding villages; income tax therefore ceased to be assessed except in Rangoon Town. In 1864-65 the yield of income tax was only Rs 1,10,000 and, as has been shown above even from the first there had always been difficulties in the collection. Income tax was therefore abolished

Substitute for Income tax, License tax and Certificate taxes.

The resulting loss of revenue was minimised by raising the rate on land in lieu of capitation tax, there was also an increase in the capitation tax on account of income formerly assessed to income tax, and a new tax the license tax, was instituted. In 1865-66 the last yielded over Rs 60,000, and next year the demand amounted to Rs 68,310 Remissions were necessary, however, to the extent of Rs 32,317, and in 1868 a fresh substitute was devised, the "Certificate tax" on "Trades and Professions" This only yielded 75 per cent. of the tax which it replaced and in the succeeding year income tax was once more introduced In 1870 the rate of assessment was raised to 3½ per cent, but a decrease of Rs. 26,515 resulted. Next year the rate was again lowered to one per cent. and the minimum assessable income was raised from Rs. 500 to Rs. 750. Despite this liberality the total receipts only diminished by one-half. In 1872-73, the mini-

mum was further raised to Rs. 1,000, and in 1873 this "distasteful tax was abolished." It had again to be imposed after the lapse of a few years, all incomes between Rs. 500 and Rs. 2,000 being assessed at 4 pies in the rupee, and those over that amount at 5 pies But the area of imposition was comparatively restricted. Previous to 1905 it had only been assessed in certain townships; in that year, however, it was extended over the whole Hanthawaddy district and the collections rose to Rs. 22,279. Just before this extension of the area of collection the minimum income had been raised from Rs 500 to Rs. 1,000.

Table XIV, Volume B, shows the fluctuations of the revenue from income tax for the Insein district excluding Hlègu township from the year 1906-07. There has been little variation.

Fisheries. The administration of the fisheries of the Insein district is less important in comparision with that of other sources of revenue than was formerly the case when the revenue from land and other sources was small In the

Burman Practice. revenue records of 1784 and 1803 mention is made of fishery licenses at rates varying according to the implement employed[1]. From Dr. Day's account[2] and the early district records [3] it appears to have been the custom for men termed "Inthugyis" to rent stretches of water from the State over which they had sole right to capture fish for sale. The "Inthugyis" in some cases seem to have held by hereditary tenure. The extent to which others possessed rights to fish for home consumption free of any payment is a matter of some doubt.

Prior to 1861. Although the Burman practice was continued in some cases the principle of annual renting by auction to the Inthugy's was introduced Between 1855-56 and 1859-60 the revenue from fisheries in Rangoon District increased from Rs. 1,40,(76 to Rs. 2,00,441. But the competition consequen on annual renting seems to have resulted in the poorer inhabitants finding it difficult to obtain their annual supply of fish; tre auction system was moreover thought to act as an incentive to gambling and in the Revenue rules of 1861 it was prohibited. Another objection to the system of annual leases was its failure to encourage improvements on the part of the lessee.

1860 to 1870. The latter difficulty was emphasised by Captain

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[1] Sittan.
[2] Report, 1869.
[3] Annual Revenue Reports, 1861-62, 1867-68.

Browne in the report on his settlement operations in 1859, and the Chief Commissioner ordered that henceforth all leases should run for a term of five years. In 1861 it is reported that "the way in which the fisheries is leased is now unexceptionable. They are let to people who reside in the vicinity, the rents being agreed on between them and the Deputy Commissioner. Some of them have been leased for a term of years which saves expense and also induces people to undertake works for the improvement of the fisheries." This system remained in force for some years. The lessee, the "Inthugyi," was a local man, and was regarded as trustee of the fishery on behalf of the inhabitants of the locality. As a further precaution against oppression it was laid down that any person in the neighbourhood of the fishery could "collect dried fish or make ngapi . . . . . to obtain fish for home consumption" But the system proved unworkable. The fisheries were valuable property; their working required the exercise of nice discretion and thorough knowledge. It was intended that they "should not be made unprofitable to the workers nor too common. And considerable judgment was required to have none but men who worked harmoniously together." The district officials were unsufficiently acquainted with local conditions and fishery affairs

Although frequent complaint is made of the numerous appeals, this procedure was so lengthy and expensive that it was only possible in a small proportion of the cases where cause for complaint existed The "Inthugyi" had an opportunity which he regularly used of "oppressing the sub-lessees and those living on the fishery, and dependent on it for food, clothing, in fact their all in all." The Deputy Commissioner cites an instance "anything but satisfactory", if it is at all credible, where the people complained in a body that they had not touched ngapi for three years." It was attempted to remedy this by inserting in the lease the names of all the lessees of the fishery, "previously only the name of the Inthugyi having been entered." The choice of co-lessees seems to have been arbitrary, in one instance an actor and a stall keeper become for the time being fishmen, at least in name The "Inthugyi" retaliated by including fictitious names as those of co-applicants for the fishery, and a case is on record where one of the names included proved to be that of his elephant It is probable, therefore, that little cause existed for the apprehension expressed by the Commissioner that in Rangoon district "too many people were told off to work a fishery."

In order to facilitate administration several of the fisheries were split up. In 1865 there were only 243 fisheries, of which 73 were leased for one year only, and 170 for longer periods. In 1867 there were 283 in all, no more than 46 being leased for a single year, and 237 for longer periods. It will be observed from these figures that the principle of granting long periods of lease had been adopted.

But the enquiry held by Dr. Day in 1869 proved conclusively the disadvantage inherent in the system of "letting by favour" as he terms it. Prices were rising, lessees profiting, and subordinate officials obtaining undue perquisites. Nor were the fisheries being improved as a result of the long lease and favourable terms, while the State was losing a large amount of revenue. From 1860 to 1868 there was practically no increase in the income thus obtained; in fact it was less in the latter year than it had been in 1861. During the last two years of the decade when the breakdown of the system was generally recognised and new methods tentatively resorted to there was a rapid increase in the revenue —

Year.	Revenue. Rs.
1860-61	2,14,388
1861-62	2,20,695
1867-68	2 20 424
1869-70	2,60,657

Reorganisation of 1870.

At the close of the last year the administration was reorganised. Hitherto it had been attempted to regulate the industry in favour of the producer, it was henceforth the consumers' interest which were most considered and the policy was directed towards placing a large supply upon the market at a cheap rate so far as was consistent with the ultimate welfare of the fishing property. Fisheries were let by public auction to the highest bidder for a term of years. "Letting by auction" took the place of "letting by favours," but the old restrictions are still traceable in the provisions requiring that bidders shall be residents of the locality in which the fishery is situated. A year or two later certain waters were thrown open for free fishing and no restriction was placed on angling with a rod and line In the rules also precautions were taken for the preservation of the fishery. Under the new system there was a rapid increase in the revenue. In 1872-73 it reached Rs. 3,18,802 and despite the transfer of two circles in the interval to other districts it was still over three lakhs in 1875 when the Thôngwa district was created.

To Thôngwa however were assigned the most important fishery areas, and there is a further decline from Rs. 1,08,057 in 1881-82 to Rs 71,641 in 1883-84, when the Pegu district was first formed It is no longer possible nor necessary to trace the course of fishery administration in any great detail. From 1872 onwards there are occasional references to friction between fishing interests and agriculture and these are still traceable in the settlement reports, but in Hanthawaddy fishing has always had to give way to agriculture. At the end of the seventies the fisheries were surveyed when the settlement department ceased to be concerned with survey, but the maps prepared were unsatisfactory consisting of imaginary lines and showing no land marks. At settlement further opportunity was taken of circumscribing the fisheries and abolishing those of less importance. Then for a long time they remained so long insignificant as to attract no great attention, but in 1907, mainly as the result of Colonel Maxwell's work on the Delta Fisheries, interest was revived and an examination showed them to be in a "far from satisfactory condition." Little attempt had ever been made to demarcate them, or prevent encroachments, nor did the implements in use correspond with those permitted in the license In this year a special enquiry resulted in the subdivision of the 28 of the larger fisheries into 96 smaller ones and an increase in the revenue. These fisheries can be worked with little capital. The main varieties of implements employed together with the license fee are shown in the subjoined table :—

			Rs.
Paikkyi	...	...	35
Paikkyido ...	...	...	30
Paikwunbu	..	...	30
Hmyawbaik	..	...	25
Hmyawbaik, small	..	...	20
Paikseik	..	...	10
Ngathalaukpaik	...	...	5
Ngazinpaik	...	..	5
Letpadanpaik	...		5
Metkun ...	...	..	3

A list of the leased fisheries of the Insein district is given in Volume B, Part I. They are nearly all in Tantabin township.

Excise. For the first few years of British rule no information is forthcoming as to excise administration, except that in 1855-56 the total revenue from liquor and opium amounted to Rs. 72,680. This did not include excise revenue derived as customs duty.

Liquor. The administration of drugs and liquors has proceeded upon different lines, although the guiding principle in both cases has been "to raise the greatest possible amount of revenue from the smallest possible consumption" (1) The administration of the excise on spirituous and other liquors has however varied greatly in detail from time to time. For some years it was endeavoured to restrict the consumption of intoxicating liquors to Rangoon Town, distillation was forbidden elsewhere, and sale only permitted at stations where there was resident an officer of the Commission or an Inspector of Police. The sale of the juice of the toddy palm was permitted at the headquarters of each subdivision. (2) By 1864 it had been accepted as advisable to "facilitate the legal drinking of toddy and so prevent the people hankering after spirits and opium." Accordingly 34 licenses were issued for the sale of toddy in the interior of the district with the immediate effect of raising the value of toddy trees which had not previously been worth appropriation. (3) The revenue derived from leasing toddy trees rose from Rs. 2,550 to Rs. 8,832 in a single year. (4) It did not however have the desired effect; passes were issued for the carriage of liquor into the country, and this facilitated illicit sale while the machinery for enforcing the regulations was inadequate, in 1865 only 12 cases of infringement of the rules being brought to light. (5) Illicit stills were also "established and worked all over the country." (6) In 1871 therefore modifications were introduced; it was admitted that consumption of spirits had spread beyond the limits of the Town, and licenses were issued for distilleries which should meet the demand. Two years later the system was further modified so as to bring it "more in accordance with the methed of managing excise in Bengal" (7)

In 1865-66 for the first time figures are available as to the revenue derived from liquor. In that year it yielded Rs. 1,38,581, rather less than half the total brought in by excise administration in the district. Until 1868 it increased, but then a substantial fall showed the necessity for the changes of 1870—1872. Thereafter it is noted that there has been "a great improvement in the revenue received."(8)

(1) Abkarri Rules, 1865.
(2) Regulations, 1861 and 1862.
(3) Abkarri Report, Rangoon district, 1864-65.
(4) Annual Revenue Report, 1865-66.
(5) District Letter Book No. 393-1866, 1033-1867
(6) Annual Administration Report, 1870-71.
(7) Annual Revenue Report, 1871-72.
(8) Annual Revenue Report, 1874-75.

Only the total receipts both from drugs and liquor however are available; but from 1872 there are separate totals for the Town and district. In 1872 the combined revenue in the district as distinct from the Town totalled over Rs 1,30,000 and this gradually increased during the next three years to upwards of Rs. 1,50,000. Then there was another fall It was ascertained that out still licenses had led to smuggling, while doubts were entertained as to their legality. Licenses for the sale of liquor manufactured in distilleries after the English method were therefore issued in their stead (1). After the formation of Pegu district there was a decline in the excise revenue and it did not reach its former level until 1898-99, having for the few years immediately preceding remained very steady. From that date there has been a rapid rise. In 1899-1900 the total revenue from excise was Rs. 1,89,485; in the course of the next five years the average annual increase was about Rs. 70,000, and in 1904-05 the total revenue reached Rs. 5,45,102, having increased by more than a lakh in 1903 and nearly a lakh and a half in 1902. This large increase is mostly assignable to altered methods of opium administration and to the greater activity in excise affairs resulting from the creation of a separate department. As regards liquor there has been no change in the method of raising revenue since the abolition of out-stills; licenses to vend are sold by auction, the liquor being, except in the case of toddy and certain country spirits, obtained from Rangoon or from some central distillery.

Drugs.

Less uniformity has marked excise of intoxicating drugs. Until 1874 revenue was raised both from opium and ganja; from the former the results were patently deleterious and the revenue derived was small. In 1864-65 it yielded no more than Rs. 7,000, and ten years later only Rs. 10,000. The vend was therefore prohibited in 1874. The opium excise has always been raised by selling the drug to the farmer and receiving from him also a consideration for the right to sell by retail. Until recent years the amount paid by the farmer was determined by auction, now it is laid down as a fixed sum. In 1861 no shop was permitted except in Rangoon Town, the sale of more than two tolas in one transaction was prohibited, and no one was allowed to possess more than half a tola (2).

In 1863-64 2,787 seers were sold, but next year this amount increased to 3,925, and fears were expressed that

(1) Annual Revenue Report, 1878-79.

(2) Abkarri Rules, 1861.

the increase was partly due to the spread of the habit in the interior of the district (1). Next year there was a further increase to 5,760 seers and the carriage of opium into the interior is said to be notorious, while opium was also being smuggled into Rangoon (2) A year later the Deputy Commissioner reports that "all the villagers from Rangoon to Thônzè (the northern border of the district) smoke opium largely (3)." The Deputy Commissioner, at that time Captain Lloyd, deplores the spread of the habit, which he considers to have been introduced within the last few years and expresses apprehension that the inhabitants will become so generally demoralised as to prejudicially affect the extension of cultivation. "What with opium, liquor and gambling" he continues, "the people of this district are being gradually ruined in health and prosperity" (4). The influx of Chinamen is described as immediately responsible for the spread of these vices. Steps were taken to check consumption by opening new shops, which it was anticipated would act as a deterrent upon illicit sale(5).

At that time the drug was purchased from India at Rs. 7-8 a seer and retailed to the Rangoon farmer at Rs. 24 a seer He sold to the retail purchaser at Rs. 2-12 a tola or Rs 220 a seer. He was allowed to sell one chest of opium for every Rs. 450 of the rent paid for the farm(6). The greater proportion of opium sold by Government was according to the returns sold in Rangoon Town. From 1865 to 1868 the annual opium revenue had been about Rs 1,50,000, but in 1872 it had increased to Rs. 2,50,000. In 1878 figures became available as to the proportion sold in the district apart from the town, and the revenue thus derived in rural areas is rather less than Rs. 50,000 This however was subsequent to the formation of Thôngwa district. The rapid increase in the sale however had attracted attention to the desirablity of checking the spread of opium consumption and so in 1881 some of the existing shops were closed.

The most important change was the abolition of the auction system which was supposed to lead to connivance at illicit practices by the auction purchaser, and it is considered that the increase in the revenue received in recent years is

(1) Annual Revenue Report, 1864-65
(2) Annual Revenue Report, 1865-66.
(3) Annual Revenue Report, 1866-67.
(4) District Letter Book No. 1033-1867.
(5) Annual Revenue Report, 1867-68.
(6) District Letter Book 1886, 1st quarter.

in some sort a measure of the blow given to illicit practices.

Table XIV, Volume B, shows this increase from 1906-07 for the Insein district excluding Hlegu township.

Stamp Revenue.

The stamp revenue of the Hanthawaddy district has shown no special features of interest, to distinguish it from other districts except the great increase derived from this source during recent years up till 1906-07. In 1895, the first year after the addition of Kyauktan subdivision, the revenue was only Rs. 40,787; in 1906-07 it had risen to over a lakh and a half, an average increase of over Rs. 10,000 a year. About this time the land boom was at its height. There has been a decline since then. A similar rise and fall is reflected in the statistics of registration and the work of civil courts. There are few contracts now-a-days which are not reduced to written agreements; even the ploughmen enter into bonds for the ploughing season in some cases, and the letting of land is often effected by a document. A large number however of these agreements are incorrectly stamped.

Table XII, Volume B, shows the fluctuations in the stamp revenue from 1906-07 for the Inscin district excluding Hlegu township.

CHAPTER XI.

LOCAL SELF-GOVERNMENT.

The District Cess Fund

An account of Local Self Government divides itself naturally into two heads, *viz.*, (1) The Administration of the District Cess Fund, and (2) The Administration of Municipal and Notified areas.

The District Cess Fund was constituted under the District Cesses and Rural Police Act of 1880 which came into force on the 1st of April of the same year. Its administration is entirely in the hands of the Government officials and is concentrated in the district office under the control of the Deputy Commissioner, but he works through the Subdivisional Officers and Township Officers. In particular the former were lately given the power of accepting contracts for the construction of public works to be done by civil officers at the expense of the District Cess Fund when the expenditure involved did not exceed Rs. 2,000.

Its activities are shown by Table XV, Volume B, which gives statements of the income and expenditure since

1905-06 for the Insein district, excluding Hlegu township. Its chief source of revenue is a 10 per cent. cess on land revenue. Next in importance comes its income from the bazaars it has built, then that from ferries, then the proceeds of the sale of licenses to slaughter cattle and then fees and fines under the Cattle Trespass Act. Formerly it maintained a District Post, but this was taken over by the Postal Department in 1906. Most of the expenditure on Education consists in grants-in-aid made to local schools. The fund maintains local hospitals and dispensaries, a vaccination and a veterinary establishment. It also undertakes to keep clean the towns and larger villages, its own bazaars and other buildings. It had till 1907 to contribute towards the commission paid to the headmen who collected the revenue on which it obtained its cess and to the cost of auditing its accounts, and of late years has had to make special outlays to help to stamp out plague.

Public Works

Most of its resources however are spent on public works such as hospitals, schools, bazaars, cattle-pounds, slaughter-houses, tanks, landing-stages rest-houses, roads and bridges and the keeping open of communications. Some of these were until lately carried out by its own staff or unskilled local labour but the more important were entrusted to the Public Works Department. This arrangement though necessary did not work very smoothly in practice. In 1895 the entire control of the Public Works Department Incorporated Local Fund Budgets was given to Commissioners of divisions, and Superintending Engineers ceased to have any control over them.* From time to time various orders were issued prescribing the procedure to be adopted in framing and sanctioning estimates for public works to be carried out at the expense of district funds, matters which seem always to have caused mistakes in district offices. In 1902 Commissioners were given the power to sanction any public work up to a limit of expenditure of Rs 10,000. In 1907* the orders regarding the sanction of public works were further explained and Commissioners were given the power to decide whether any particular work should be done by the Public Works Department or by Civil Officers in exception to the general rule that any work costing over Rs. 2,500 should ordinarily be done by the Public Works Department.

From the 1st April 1908, District Cess Funds were treated as Excluded Funds and ceased to be Incorporated

* Local Government Circular No. 37 of 1907.

Local Funds. In order to preserve the roads of the district, some of them were in 1909* notified under section 2, Burma Highways Act, by which carts were restricted to the terms between 1st January and 15th May. In 1883† the proportion in which the cesses and taxes levied under the District Cesses and Rural Police Act were to be appropriated had been ordered to be fixed when the District Cess Budget was to be submitted for the orders of the Chief Commissioner. In 1908‡ this arrangement was abolished but the following maximum percentages of the total income of a District Cess Fund which could be spent on various objects were prescribed by the Local Government.

	Per cent.
Communications	50
Works of public utility	25
Sanitary improvements	25
Education . .	30

From the 1st April 1910 the civil works of the District Cess Fund were taken over by the Public Works Department. This arrangement was the consequence of the friction referred to above which a gradual devolution of power to sanction expenditure had not sufficed to allay. In 1891 the apportionment of public works and repairs between the Public Works Department and Civil Officers had been systematized but in 1900 the question was again raised because of objections made to Public Works Department charges and the defects of the dual system. Separate engineering establishments were proposed but were rejected as being too expensive and because such an experiment had been a failure in Thôngwa. From 1902—04 the question of the agency by which public works should be carried out was raised and a separate engineering establishment was proposed for Hanthawaddy and Pegu districts combined. In 1904 objections were again made to public works charges and in 1907 the question of an engineering establishment for Pegu was again raised. Finally Government passed orders in 1911§ that separate engineering establishments were too costly and that the Public Works Department should do all public works except those of a petty nature and the District

* P W D Notification No. 9, dated 16th January 1909.

† Judicial Department Notification No. 256, dated 31st December 1883.

‡ Local Department Notification No. 36, dated 10th August 1908.

§ Public Works Department Resolution No. 250-508E., dated the 19th January 1911.

Cess Fund engineering establishment should be absorbed by it. Devolution however continued. Among other powers that of sanctioning public works costing up to the amount of Rs. 5,000 was given to Deputy Commissioners,* and in 1912 that of sanctioning the construction and also repairs costing over Rs. 200 of district and dâk bungalows to Commissioners.†

History of the Fund.

In these movements Hanthawaddy as the district with the largest District Cess Fund in the province had its full share. This is shown in the annual reports but they are available for a few years only as they were prescribed in 1906‡ but discontinued in 1911.§ The fund was so large that there was always difficulty in spending it.

In 1893 a minimum closing balance of Rs 65,000 had been prescribed for Hanthawaddy district, but so far was this limit from being passed that at the end of nearly every year it was found that a large sum of money was left unexpended, as the following table shows:—

	1900-01.	1901-02	1902-03.	1903-04.	1904-05.
Closing Balance of District Cess Fund in rupees.	1,90,117	2,34,444	2,61,500	2,32,876	1,90,485
	1905-06.	**1906-07**	**1907-08.**	**1908-09**	**1909-10.**
Closing Balance of District Cess Fund in rupees.	.	40,027	2,08,930	2,66,418	2,13,188

In the resolution of the Local Government on the accounts of the District Cess Funds of the province for the year 1901-02 it is remarked that more liberal expenditure was to be desired and reports were called for as to whether there was any intention to increase the closing balance with a view to meet expenditure on large undertakings such as light railways For Hanthawaddy district the answer was in the negative. In 1905-06, the Deputy Commissioner, however, pointed out that in the three years 1901-02, 1902-03 and 1903-04 there had been failure to spend nearly a lakh of rupees which had been allotted to public works and suggested various reasons of which the chief was that

* Local Government's Circular No. 16 of 1911.
† Local Government's Circular No. 2 of 1912.
‡ Local Government's Circular No 32 of 1906.
§ Local Government's Circular No. 5 of 1911.

the Deputy Commissioner and the Superintending Engineer were not in close enough touch. He showed the expenditure on civil works by Civil Officers as follows:—

Year.	Expenditure.
	Rs.
1901-02	54,000
1902-03	55,000
1903-04	50,000
1904-05	23,000
1905-06	16,000

and said that no programme existed of small works so that there was a difficulty in spending money on them. In consequence of this the Subdivisional Officers had been directed to furnish lists of small works suitable for their subdivisions. He also pointed out that there was a want of professional supervision of such works as no District Fund Overseers existed such as were employed in Upper Burma. Regarding finance, he complained of the high charges demanded by the Public Works Department for expenses of that part of their establishment which devoted itself to carrying out works for the District Cess Fund and of the contribution made towards the cost of the similar part of the establishment of the district office.

In his report for 1906-07 the Deputy Commissioner noted the remarkable fact that for a considerable part of the year the Disrict Cess Fund was overdrawn and that the closing balance was only Rs. 40,027 or about Rs. 23,000 below the minimum prescribed The reasons were the loss of revenue due to the disastrous floods of 1905-06 and 1906-07 and to the expenditure which had to be made to stamp out plague which was indigenous at and near Insein for the greater part of the year

Although in 1907-08 the opening balance was only Rs. 40,027, an increase in cess and ferry receipts and a decrease in the amount spent on plague (Rs. 6,600 out of an estimated amount of Rs 32,000) again raised the fund to a strong financial position The Deputy Commissioner remarked that the dual method of carrying on public works was not altogether a success· that the Civil Officers are in want of expert advisers and that the Public Works Department Code was too rigid and elaborate for the petty requirements of the District Cess Fund. During the year the Syriam bazaar and the Letkokpin rest-house were built but the Deputy Commissioner continued to find it unsatisfactory that the fund could not spend enough. During the year the District Cess Fund ceased to contribute to the cost

of revenue collection by village headmen and to the cost of audit.

In 1908-09 the Deputy Commissioner arranged that Civil Officers should take a larger share in civil works and appointed three Overseers on Rs. 150 a month each to help them. The experiment was a success. In this year landing stages at Syriam and Kadapana were built. The Deputy Commissioner strongly urged the appointment of a District Engineer for District Cess Fund work alone but this request was refused in the general orders already referred to by which all but petty works were to be carried out by the Public Works Department.

After this year the expenditure on civil works suddenly rose but in 1912 the District Cess Fund of Hanthawaddy district ceased to exist and was divided between the two new districts of Syriam and Insein.

The Insein Municipality.

The village and neighbourhood of Insein was made a notified area in 1903.* The first members of the Town Committee were† the Subdivisional Officer, Township Officer, C. E. Cardew, Esq., Maung Po Sin and Ra Wa. The available receipts amounted to about Rs. 7,000 inclusive of Rs. 1,700 from daily bazzar collections, Rs. 1,970 from bazzar stall rents, Rs. 1,180 from slaughter-houses, Rs. 500 from land and house tax, Rs 124 from the cattle-pound and Rs. 80 from judicial fines. Little was done this year : the balance was allowed to accumulate as the question of abolition of the committee was before the Local Government. When the committee was constituted it was intended that all railway buildings should be included in the notified area and should be taxed. To this the Railway company objected on the ground that they provided for them a more efficient service of sanitation and lighting than the local committee could be expected to supply. Friction was feared if an outside agency were introduced into the workshops. The Local Government agreed with the Railway Company; so what are called the "Railway Lines" were excluded from the notified area. Jail land was also excluded. The means of the prevention of fire occupied much of the attention of the committee during the year. The bazaar was insured for Rs. 35,000 at a premium of 3 per cent per annum. Lamp posts were erected in the town.

* Municipal and Local Department Notification No. 50, dated the 26th March 1903.

† Commissioner of Pegu Division's Notification No. 57, dated the 6th May 1903.

The Hospital Assistant was appointed to pass cattle for slaughter on a salary of Rs. 10 a month. The *thugyi* of Mingaladon circle was appointed to collect taxes and to record vital statistics for the committee within the notified area.

1904-05. The committee began their second year with a balance of Rs. 5,839. Their revenue during the year was Rs. 14,767 and their expenditure Rs. 6,714 so their closing balance was Rs. 13,892, the policy of the committee being to accumulate a large balance in order to carry out a comprehensive drainage scheme for the town.

1905-06. In May 1905* the notified area was extended to include much of the residential suburbs of Insein and the assessment accordingly rose by Rs. 1,100 to Rs. 3,200. Part of the town was evacuated on account of plague. The Secretary's pay was raised from Rs. 20 to Rs. 30 and a peon added to the establishment. The Hackney Carriage Act was introduced and had the effect of improving the carriages plying for hire. The lighting of the town was extended and improved. Day conservancy began in April 1905. A permanent segregation camp for infectious diseases was built and the cost of this with other expenses incurred in connection with plauge came to Rs 1,500. Rs 300 were paid in grants to Railway schools, the first expenditure of the committee on education. As yet there was no system of night conservancy The notified area was wide and straggling--thus Penwegon quarter was shut off entirely from the rest by railway land and access to it was difficult owing to stagnant water.

The principal points occupying the attention of the committee were the suppression of plague and the control over sanitation which had been taken from the committee and handed to the special plague officer. This proved a bad system, so it was proposed to make the special plague officer the vice president of the committee The committee had no power to make bye-laws so had not sufficient control over house-building. There was great need of a night conservancy system and it was hoped to arrange co-operation with the Railway Company. The closing balance rose to Rs. 17,301.

1906-07. In 1906 the epidemic of plague and other causes reduced the receipts of the committee but the expenditure was also less. Only a few cases of plague occurred as compared

*Municipal and Local Department Notification No 79, dated the 8th May 1905

with 68 in the previous year. The committee's policy was still to accumulate funds in order to carry out night conservancy, drainage and street-lighting, all pressing needs. The closing balance was Rs. 18,415.

1907-08. In 1907-08 the Secretary absconded with some of the Town Fund money (which however was afterwards recovered) and there were frequent changes of President. The cost of the plague establishment was thrown entirely on the Town Fund causing an increase of Rs. 10,813 in the expenditure under the head Public Health and Convenience, but the Railway school which was really outside the notified area ceased to draw grants, so Rs. 1,522 was saved under the head of Public Instruction. The cost of the plague establishment was felt to be a heavy burden on the resources of the Town Fund. Money was still being saved to pay for a complete system of night conservancy. The closing balance was Rs. 16,125.

1908-09. In the year 1908-09 a grant of Rs. 228-8-0 was given to a new Buddhist School opened in the town, raising the total expenditure under Public Instruction to Rs. 678-8-0. The number of street lamps was again increased and some model stances for washing clothes were erected but the latter were not a success The bad economy of having the railway administration side by side with the town administration began to be noticed. The closing balance was Rs 17,037

1909-10. In 1909-10 a grant of Rs. 3,485 was received from Government for the drainage scheme. A road and two reinforced concrete bridges were built, a larger contribution was made towards education, and money was spent on conservancy carts and bullocks and byres to begin the night conservancy system. A recreation ground was provided Roads and leasable house-sites were said to be crying needs of Insein and owners showed themselves public spirited in giving up land for widening roads. The night conservancy scheme was begun in a small way on 1st February 1910. The collection of the town taxes was taken from the circle *thugyi* and given to ward headmen. A fixed sum was arranged to be paid by the Railway Company in lieu of taxation. A new Secretary was appointed and a qualified Overseer on Rs. 150. The closing balance was Rs. 14,834.

1910-11. On the 1st of September 1910, the notified area became a municipality * with 6 elected members and 6 nominated members of whom 3 were Government Officials. A revision

* Municipal Department Notification No. 115, dated the 1st July 1910.

of assessment of the frontage and area taxes took place causing an enhancement of about Rs. 1,100. A loan of Rs. 24,000 was received from Government for the improvement of 17·28 acres of land at the river bank. The extension of the night conservancy system caused an increase of nearly Rs. 3,750 in the expenditure and Rs. 1,364 was spent in reclaiming land for the recreation ground. The night conservancy fund received Rs. 3,768 in taxes and showed for the first time a slight margin of profit. A grant was asked from Government to sink an artesian well but was refused. Borrow pits were filled up and drains dug at a cost of Rs. 1,816. Both a road conservancy and a night conservancy establishment were maintained, the latter on the double bucket system. Roads and a culvert begun the previous year were finished. Contributions were made to the Insein Buddhist school and several Vernacular schools It was noticed that many new houses were being built Insein was growing popular as a residential surburb as people were finding Rangoon very expensive to live in. So the committee proposed to abolish the house-tax and substitute a 5 per cent tax on annual value but it was felt that taxation should not be unduly increased as neighbouring villages like Thingangyun, Kamayut and Thamaing were also being chosen as residences by people from Rangoon The closing balance was Rs. 30,008. The income and expenditure for this year are given in Table XVI, Volume B

1911-12. In 1911-12 the Deputy Commissioner, Insein, became President The frontage and Area tax was altered to one on the rental value of houses from 1st October 1911 * and this caused a large increase in receipts. Fees from a pawn shop were received for the first time. An increase in expenditure was caused by the disposal of the Government grant for a water supply and the cost of land (nearly Rs. 20,000) acquired by the Municipality on the river-bank. A preliminary examination of land near Insein for a gravitational water supply was made as the well supply gets scanty near the and of the hot weather Only a few cases of plague occurred Bye-laws regarding the sale of food and drink and the construction of buildings were framed. The committee now proposed to turn its attention to the opening up of areas for building sites and to the imposing of a lighting tax and so releasing money to spend on roads, etc. The closing balance was Rs. 4,447.

* Municipal and Local Department Notification No. 124, dated the 19th June 1911.

In the year ending March 31st 1913 the Municipality received Rs. 42,550 and spent Rs. 35,114 and the closing balance was Rs. 12,235. Eighty-one street lamps were lighted and a tube well was successfully sunk near the Court House at a cost of slightly over Rs. 3,000 and the sinking of more is contemplated. A drainage scheme is being drawn up for the town. There were only one or two suspected cases of plague and so the charges due to this head were few. Rules for the proper inforcement of the Vaccination Act were put into force with the approval of the Local Government and a Municipal vaccinator is to be appointed. For sanitary purpose Insein is practically divided into two parts, one, the Railway quarters, are under the control of the District Railway Medical Officer and the other, the rest of the town, under the control of the Civil Surgeon. This arrangement proves satisfactory. The ward headmen carry out the duties assigned to them but do not give any marked assistance to the Municipal committee. No important public works were carried out during the year.

The staff of the Municipality is shown in Volume B, Part I

Notified Areas

There are no notified areas and the Insein Municipality is the only Municipality the district.

CHAPTER XII.

EDUCATION.

Early days.

This district until quite recently formed part of the educational unit of Hanthawaddy so that it is difficult to trace the history of vernacular education in this portion of the wider area. Owing to its proximity to Rangoon it shared the benefits derived from the various schemes devised in that town to improve education. In Insein town only has any decided demand been evinced for instruction in English; there is no other large town in the district. The Burma Boarding school, Insein, had a brief existence in 1892-93. The Railway Anglo-Tamil school opened in 1892 is the oldest institution of this kind that is still existing. Vernacular education remained for long almost entirely in the hands of the *phongyis* till work was commenced among the Karens by the American Baptist Mission shortly after the annexation. This led non-Christian Karens to open village schools which they liberally supported. At the same time lay schools gradually grew in numbers among the Burmese

population, so that now the lay schools outnumber the monastic schools recognised by the Education Department and are much more efficient. Among the Karens non-Christian pupils are in excess of those of Christian parentage.

Controlling Agencies.

Anglo-Vernacular education is under the control of the Inspector of Schools, Pegu Circle. To aid with the vernacular work there is an Assistant Inspector. There is also a Deputy Inspector whose sole charge is the Burmese schools in this district, his headquarters are at Insein, he has the assistance of a Sub-Inspector of Schools. The Karen Deputy Inspector for the Insein and Syriam districts looks after the Karen schools. The Tamil schools are under the care of a Deputy Inspector of Tamil Schools who controls all the Tamil schools in the province. For the Mohamedan schools there is a Mohamedan Deputy Inspector. The only schools under direct Government control are the Engineering school and the Reformatory, Insein.

English Education.

The Railway European school, Insein, admits only European and Anlo-Indian pupils. In 1912 there were 83 pupils (36 boys and 47 girls). The highest class is Standard V. In Insein there are three Anglo-Vernacular schools, the Railway Anglo-Vernacular Tamil school, with 175 pupils (162 boys and 13 girls) graded up to Standard VII, the Buddhist Anglo-Vernacular school with 180 pupils (153 boys and 27 girls) graded up to Standard VII and the Insein Anglo-Vernacular school graded up to Standard VII recently opened as a private venture. Pupils outside Insein who desire an English education join the schools in Rangoon so that the district cannot be said to be destitute of the means of obtaining advanced education.

Vernacular Schools, Burmese.

The number of schools recognised by the Education Department varies from year to year as school managers in small villages are constantly changing chiefly because they find their income not sufficient to induce them to continue work The want of local support is the cause of this fluctuation but now that salary grants are being more freely given to certificated managers and teachers, schools are becoming more permanent and efficient. There were in 1912 thirty certificated and 200 uncertificated teachers in the district and 125 registered schools giving instruction according to the Education Code; 16 were Secondary, 95 Primary and 14 Elementary schools teaching only reading, writing, and arithmetic. There were 1,260 pupils in the Secondary schools and altogether 5,826 pupils under instruction. More

than half of these schools were lay schools. The majority of monastic schools aim chiefly at giving religious instruction to the young and do not submit to Government inspection. Of 247 such schools only 6 are known to attempt anything by way of secular education. The number of pupils in these private or unregistered schools is about 2,606. There are four recognised Pâli schools that prepare candidates for the Patamabyan examination.

Karen.

All registered Karen schools are under lay managers. In 1912 there were 18 certificated and 148 uncertificated teachers. There were then five Secondary, 60 Primary and 5 Elementary schools The number of pupils was 1,986. All schools are attended by both boys and girls. The medium of instruction is Burmese but Karen is as a rule taught as a second language. Private schools not under inspection numbered 19 with 254 pupils in only 4 of which is any attempt made at imparting elementary education; the others give religious instruction only and are the only Karen schools in the hands of the *Phongyis*.

Tamil and Telugu.

There is one registered Lower Primary School at Insein with 16 pupils, and two private schools with 38 pupils

Mohamedan.

One private school at Insein has 25 pupils who are taught little else than reading of the Koran.

Rs. 500 Schools.

Two schools were built at Government expense in 1906. One at Nandawgon, Taikkyi township is still in existence. The other was transferred in 1912 from Leingon to Nyaunggon. These schools have not been a success chiefly owing to the difficulty of getting good teachers to remain for any length of time in these small villages.

Female Education.

In Anglo-Vernacular schools there were 40 girls in 1912 and in the European school, Insein, 47. Only one girl was in the Middle department. In Vernacular schools there were 2,530 girls in registered schools, 1,600 Burmese, 921 Karen and 3 Tamil. Most Vernacular schools that are not monastic are mixed schools, so that no special schools for girls are required. Karens in particular are eager to educate their girls but the large number of Burmese girls attending schools shows that the Burmese are alive to the benefits of education to girls. Very few *Phongyis* admit girls to their school, hence for them lay schools are a necessity.

Hand and Eye Training.

A special class for Hand and Eye Training was opened at Maung Myat San's School, Dabein, in 1912 under a Government teacher trained at the Government Normal School, Moulmein. There were 53 pupils in this class.

The most important institution for imparting technical instruction is the Engineering School, Insein. For various reasons this school has not attracted many boys from the Province. This school was founded in 1895 for the purpose of supplying candidates for the Upper and Lower establishment of the Public Works Department although a number of pupils who have been trained in the school have not joined that service. The courses comprise a Technical High School which prepares pupils for joining either the Engineering or the Draughtsman course. A member of the covenanted service of the Public Works Department was placed at the head of this school in 1912

Technical Education. Engineering School.

New buildings were opened in 1907 and a new prospectus drawn up to suit the improved conditions under which the institution was enabled to work and new machinery was installed. In that year there were 90 students of whom 9 were Anglo-Indians, 12 Burmans and 69 natives of India. In 1912 the numbers had gone down to 33, due chiefly to fewer Indians being admitted.

There is a small Survey School at Insein under the control of the Land Records Department for the training of members for the subordinate staff of that department.

Survey School.

Special arrangements were made in 1881 for the training of natives of the province for the Railway Department by attaching 12 apprentices to the Railway workshops at Insein, in receipt of monthly stipends from Government, the course extending over five years. At first all the apprentices were Karens By 1886 there were 52 apprentices of whom 26 were Europeans or Anglo-Indians, 25 Karens and Burmese and 1 Chinese. In that year three European apprentices who had completed their course of training were employed by the Irrawaddy Flotilla Company. In addition to spending nine hours a day in the workshop the apprentices attend classes in the evening where they are taught mensuration, plane geometry and elementary facts concerning the steam engine and steam. This class has been in existence since 1804. A salary grant is allowed to the instructor. In addition to this there is a class in English for Burmese and Karen apprentices In 1912 there were 48 apprentices, 19 Europeans or Anglo-Indians, 8 Burmese, 15 Karens and 6 Chinese. The sanctioned number for whom lodging is provided is 32 Europeans or Anglo-Indians domiciled in Burma and 28 *bonâ fide* natives of Burma.

Railway workshop

The Reformatory School, Insein is intended for boys under 18 years of age who have been convicted of serious crime. The school was at first under the Inspector-General

Reformatory.

of Jails but in 1900 was handed over to the Director of Public Instruction. The school was originally situated at Paungdè under the charge of Mr. Masters who was transferred with the school to Insein. The boys are taught part of the day the regular lessons of a vernacular school. Their manual work consists of carpentry, and cane-weaving, tin-smithing, shoemaking and gardening. In 1912 there were 94 boys.

CHAPTER XIII.

Public Health.

Early days.

Concern for the public health was not a feature of the Burman administration and there are scanty records of the health of the district prior to British rule. During the first war the climate of Rangoon was considered salubrious, and apart from particular localities the general health of the district appears to have been almost always good.[1] In 1842 however there was a notable epidemic of cholera so severe that the fields remained unsown and famine ensued. The sparseness of the population despite apparently favourable conditions early attracted the attention of the English officials. An enquiry was instituted by Sir Arthur Phayre which in its result tended to establish the opinion that although malaria was locally prevalent the public health in general was good. The Civil Surgeon of the district which at that time included the town of Rangoon comments on the rarity among Burmans of death as the "direct or indirect result of primary and secondary syphilitic affections and from intoxicating beverages"[2] and notes that very few deaths are due to the deleterious influence of opium. As a positive outcome of the enquiry a stimulus was given to the record of vital statistics, but administrative conditions did not permit of sufficient accuracy for these to be of any use and in 1865 they were restricted to the towns. Definite recognition of the responsibility for public health appears for the first time in 1865 with the appointment of conservancy officers. But in 18‸7 it is reported that although the people had been instructed in the value of sanitary measures there had been no practical and useful results. The only remedial steps yet undertaken had been the construction of a few roads. It was proposed that public latrines should be

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1. Alexander. The Burman Empire.
2. Memo on sparseness of population.

erected and those using them be taxed for their support, and those not using them be taxed more heavily; while the sweepers were to enforce their use by strangers at a fee of a pie per head. Later on however a less cumbrous machinery was devised and orders were passed prohibiting the cutting down of trees and bushes in the vicinity of towns. Nothing as yet appears to have been attempted as regards sanitation in the district outside the towns. Accounts are available from 1869 of the income of the district outside Rangoon itself, but there are no records of expenditure nor signs that anything was spent on sanitation.

Hospitals. The Burmans at that time were considered favourably disposed to the methods of European medicine, but although a proposal was made in the sixties and seventies to facilitate training in medicine it proved impracticable, and the hospitals and dispensaries had all to be staffed by natives of India. It is stated that this tended to lessen their acceptability by the people There is now a Government Medical School in Rangoon however and the Burmans are beginning to think of qualifying for the practice of European medicine. The stress of other work left little room for attention to the administration of public health and the development of existing conveniences is therefore recent history. There are now hospitals maintained by the District Cess Fund at Hlègu and Taikkyi and there is also a hospital at Insein Many of the people of the district, however, go to be treated at the Rangoon Hospital as it is so near. In 1905-06 the medical staff maintained by the Hathawaddy District Cess Fund was 1 assistant surgeon, 2 hospital assistants, 2 compounders, 1 midwife, besides clerks and menials. The present staff for Insein District is given in Volume B, Part I.

Diseases. There are no diseases peculiar to the Insein district nor any specially prevalent in it. It is impossible to tell its birth and death rates as they are only available (Table III, Volume B) for the three townships of Insein, Tantabin and Taikkyi and these are of doubtful value as a glance at the Sanitary Reports of the Province will show that the vital statistics annually recorded are not considered wholly reliable. The birth rate is probably below the truth and one reason that has been assigned is the small attention paid to a birth among the Burmans compared with that paid to a death which nearly always involves an entertainment. On the other hand deaths of infants often escape registration. It has been noticed that Hindoos have a higher death rate than any other race and the reasons given are their poverty, miserliness, intemperance and insanitary habits.

The Sanitary Reports classify the deaths under cholera, small-pox, fevers, bowel complaints and other causes. By far the largest number of deaths (except those under "other causes") are classified under "Fevers" but this is probably only because the Burmans cannot distinguish between diseases and because death is very often preceded by a rise in the temperature of the body. Next in frequency come bowel complaints and then cholera and small-pox The mortality under the last two vary very much from year to year. Epidemics of these diseases rise and die away again. To prevent cholera and promote generally the health of the people little can be done in the villages except the encouragement of cleanliness, the draining and clearing of village-sites and the digging of tanks and wells, and the amount that can be done depends to a great extent on the state of the District Cess Fund.

Sanitation. In 1892 an enquiry was made on the sanitary state of villages of Burma and medical men noted that they usually occupied swampy sites, were badly drained, had no proper latrine accommodation and were full of filthy puddles especially under the dwelling-houses. To counteract these evils however it was observed that the people lived on houses raised a foot or two above the ground so that a current of fresh air passed between the puddle and house, their houses were built some distance apart, kept half open and made of previous material such as bamboo matting, so that the ventilation was excellent; the people had cleanly habits and used for the purposes of nature strips of jungle some little distance from the village where there were many natural scavengers; and that they were careful of drinking water not only for themselves but for wayfarers

This is still generally true of the Burmese and Karen (but not of the Indian) villages in the district and the villagers will no doubt remain healthy so long as they have plenty of space to build a little extra land besides house-sites and a good-water supply and adhere to the custom of living in houses raised above the ground keeping their houses open and using bamboo or thin planking for their construction. There is often difficulty in obtaining space even for house-building—either the river bank has fallen in and reduced the village-site or rice-land has encroached into it Commodious village-sites are, however, essential to the health as well as the comfort of the people and it is an economically sound policy to supply them. In 1895 rules for sanitation in villages under the Lower Burma Village

Act were framed and have no doubt done much to improve the public health of the district.

Vaccination.

To prevent small-pox vaccination was instituted in the district in 1864 and since that year vaccination operations have been systematically carried out in it but without great success. Hanthawaddy district was always a stronghold of inoculation which the Burman prefers because it renders a child absolutely immune while vaccination does not render it absolutely so, forgetting that inoculation is very liable to introduce other diseases into the system and that a vaccinated person only gets small-pox, if at all, in a very mild form During 1880 the Vaccination Act became law and it was extended to Rangoon Town in 1884 but vaccination has never been compulsory in the district except in Insein Town In 1880 the Hanthawaddy district had a staff of 2 native superintendents and 2 first class and 5 second class vaccinators and it was kept about this strength till 1909 when a reorganisation took place. It was reported that the European medical staff of the district had not sufficient knowledge of Burmese to explain the benefits of vaccination among the villages, but owing to the efforts of the American Baptist Mission vaccination made great progress among the Karens By 1890, when Hanthawaddy district was practically identical with the present Syriam and Insein districts, less Hlègu township, vaccination had steadily extended but the people were still averse to it. Inoculation was still preferred and even practised under the guise of vaccination the reasons assigned being —

(1) the natural disinclination of the Burman to provide for the future;

(2) the bad results of vaccinating sickly-children,

(3) the opposition of Burman doctors who practised and made a large part of their income out of inoculation, and

(4) the distrust on the part of Burmese mothers of young vaccinators. The staff then consisted of 1 native superintendent and 6 vaccinators and out of a total population of 347,448 no less than 32,742 were reported to have been vaccinated in the year 1889-90 at a cost of Rs. 6,747 and 81 persons were vaccinated in dispensaries besides. Table XXIII, Volume B, gives statistics of operations in Insein district excluding Hlègu township. They show an increase of successful operations.

In 1894-95 in spite of the reported extension of vaccination inoculators were still at work and there was great opposition to vaccination except in Karen villages. Moreover the

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statistics showing the number of operations performed were looked on with much suspicion. In Hanthawaddy district the progress of vaccination gradually lessened and inoculation got a firm hold so much so that on the 15th October 1909, the Act for the Prevention of Inoculation was put in force in Hanthawaddy district and the vaccination establishment completely reorganised.

Fevers. To combat fever, especially malarial fever, measures are taken in the district similar to those taken all over Burma, *viz.*, the clearing of jungle and filling up of pools near villages with a view to prevent the breeding of mosquitoes, and the wide distribution of quinine for sale at a low price at post offices, bazaars and other central places. Powders were distributed first but in 1909 tabloids were substituted and the price of the drug was lowered.

Dengue fever was introduced into Burma from Northern India and Bombay in 1872 and still attacks people in the district.

Plague. In 1897 plague had made such havoc in India that a council to advise the Local Government was formed and rules in accordance with the Venice Convention to prevent its spreading to or in Burma were framed in that year. In 1898 plague was first introduced into Burma by sea, one case being found in June at Moulmein and the other later in Rangoon Harbour Two more cases imported by sea were found in 1899, 4 in 1900, 5 in 1901, 3 in 1902, 10 in 1903 and 3 in 1904 and it was not till 1905 that the first indigenous case occurred—and that in Rangoon—but by the end of that year several indigenous cases had been reported and the towns of Rangoon, Bassein and Hlègu (then in the Pegu district but now in the Insein district), were infected with the disease, while in Hanthawaddy 17 deaths occurred. Thereafter the disease established itself in the district and has not yet been entirely stamped out.

To combat plague the usual operations of surveillance, evacuation, disinfection, rat-killing, inoculation, etc., were at first carried out, but in accordance with the conclusions of the Plague Commission many measures for the purpose of destroying the plague germ in houses were abandoned and efforts were made to prevent the access to man of infected rats and their fleas and to counteract the effect of the bites of infected fleas. Chemical disinfection of houses was to a great extent abandoned in favour of simple cleansing operations and evacuation and the destruction of

rats. In 1910 there was a general opinion that the best means of preventing the spread of plague lay in permanent sanitary improvements to houses, bazaars and granaries and their construction so as to afford the minimum of harbourage for rats, so divisional ratting gangs were organised to take measures on a large scale wherever plague should appear in any part of a division. On the 1st of April 1911 expenditure on plague operations throughout the greater part of the province was provincialised, contribution based on past expenditure and ability to pay being levied from Municipal and District Cess Funds and the question of substituting a permanent sanitary staff for the temporary plague staff occupied the consideration of Government.

Food. The food of the people is good and plentiful[1] so it is not for want of good food that the people suffer in health. A certain amount of the bowel complaints prevalent in the rains may, however, probably be ascribed to the eating of hastily cooked or raw food by cultivators who come in tired and wet from their work in the rice fields where they have been standing or walking above, the ankles in watery mud all day often under a hot sun.

Infantile Mortality. There is a very large infantile mortality in the province and as the death rate among infants is larger in rural areas than in towns doubtless in Insein district too In Insein district excluding Hlegu township the percentage of deaths under five years to the total number of deaths is shown by Table III, Volume B, to lie between 39 and 45. This has been ascribed to the employment of ignorant midwives and improper feeding On the 15th September 1906, the Society for the Prevention of Infantile Mortality in Burma was constituted and received the encouragement and financial support of Government but it is not known to what extent it conducted operations in Syriam district.

Injuries. The injuries include drowning, falls from palm-trees, snake-bite and goring by buffaloes. Snakes, mostly Russell's Vipers, are common in the fields, especially in years of floods, but the cobra and the kareit are often found. Sir Lauder Brunton's lancets are carried by one or two of the officials and have proved efficacious in many cases. The country people too have their own remedies.

Table III, Volume B, classifies the deaths in Insein district excluding Hlègu township from 1907 under the main causes. The figures show small variation but indicate slight outbreaks of small-pox in 1909 and 1910.

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[1] See page 53.

CHAPTER XIV.

MINOR ARTICLES.

Akayein. A township or province of Hanthawaddy in Burman times, founded in 550 B.E. (1187 A.D.) by Maheintha. It lay between Pegu and the mountains. Details of population but not of revenue are given in the record of 1803. It continued to have a separate existence as a township for some time after the British occupation, but was subsequently included in Pegu. At the British occupation Akayein included two circles Kayagyun and Mahura. The cultivated area was returned as 14,156 acres in 1864 and 27,324 acres in 1865.

Angyi. A township of the Burman province of Dala joined on to Hanthawaddy at the British occupation as part of Rangoon district. The Headquarters were originally at Tamanaing, the centre of the salt industry, but appear to have changed to Pyawbwè when the rice-trade developed. It included six circles Mokkyun, Tamanaing, Kawhmu, Mahlaing, Pyawbwè and Kodaung. The area under rice was 39,088 acres in 1864. In 1875 Indapura, Twante and Panhlaing circles were added to it and later on it was again subdivided into two townships Twante and Kungyangôn. These however divided the island into North and South not into East and West along the Ridge as was formerly the case. In Burman times Angyi appears to have included Twante, and to have been the headquarters township of the Dala Province so that in the early accounts of the district Dala may have reference to the whole province or to Angyi township only. The name of the township became known as Angyi early in the nineteenth century. The ruler held charge on condition of rendering naval service; one of the war boats which he supplied did so well at the Rangoon races that the name "angyi" ("marvellous") was applied, first to the boat and then in course of time to the township.

The making of mats, fish-paste and salt used to be important occupations in this township (See Twante, Dala).

Dala. A province of the Peguan Empire including the townships of Pyapôn, Inde, Thôngwa and Angyi. The headquarters were at Twante in the township of Angyi. About the end of the eighteenth century Pyapôn became a separate administration and a few years later Angyi, both of them being placed under "penins" who held office on condition of rendering naval service. Originally it appears to have been a separate principality, but it passed under the rule of

Syriam and subsequently under that of Hanthawaddy. The Governor of Dala was not however subject to the Governor of Hanthawaddy and until the British occupation its revenues were always assigned to the chief queen. On the formation of Rangoon district it was included therein, but the greater portion passed to Thôngwa on the formation of that district in 1875, leaving only Angyi in Rangoon district. This continued to be spoken of as Dala and the name is now loosely applied to that portion of Rangoon and its environs which lie across the Rangoon River within the limits of the old province.

As in the rest of Hanthawaddy there are two series of legends. The first relates to the founding of the Shwe San Daw Pagoda by a King Thameintaw Byinyan about the time of the Buddha. There is then a gap presumably consequent on the expulsion of the Orissa colonists. It is said that the island of Dala, then known as Thamaing Saga, remained uninhabited for three hundred years. Then a jungle child was placed there by his foster parents, a pair of eagles. As a result of his charity to forwandered sailors he became the possessor of a magic bow, which was the means of his giving assistance to the king of Thaton. The king sent his daughter to become his queen, but he fled before the splendour of the princess and her retinue and climbing the tree where he had first been nurtured fell down and died. She established a city Kyakatwayan with defences of thorny bushes at Kabin near Twante but Bawgathena, a descendent of Nga Than Hlyin of Syriam captured the city and took her for his bride. Thenceforward the island remained subject to Syriam and subsequently to Hanthawaddy. Dala has always been the first object of attack; when the Burmans attacked Hanthawaddy and Talokpyomin the king of Burma established a kingdom there when driven out of Pagan by the Chinese.

Dawbôn. One of the original townships of Rangoon district formerly known as Ma u. It included Dabein, Sitpin and Kyaukchaung circles. The first of these passed to Pegu on the formation of that district in 1883 and the other two are now in Insein district and except for a small portion on the east of Sitpin retain their original boundaries. In 1864 there were 25,831 acres under cultivation, but in 1865 owing to cattle murrain this had been reduced to 12,543 acres.

Hlaing. A township or province of Hanthawaddy founded by Ponnareika in 673 B.E. concerning which no details are forthcoming in the records of 1783 and 1803 as now extant.

It originally included Thônzè circle, made over to Tharrawaddy in 1873. Since then its boundaries have remained unaltered but it is now known as Taikkyi, where the headquarters are now situated. In 1864 there were 18,053 acres under cultivation. (See Taikkyi.)

Hmawbi. A township or province in Burmese times, founded in 670 B.E. (1319 A.D.) by Ponnareika. In 1803 A.D. it contained 198 households, about two-fifths being Karens. There are no details of revenue in the record of 1803. There is information however as to the revenue paid just before the British occupation At this time the township only included the circles of Hmawbi, Myoma, Leingon and Kyaunggon. The total revenue amounted to—

Fisheries	...	250 tickals (about Rs 400)
Taungya ...	...	250 ,,
Land .	..	250 ,,
Capitation, etc	...	300 ,,
Total	..	1,050 tickals

There was also a charge of about 250 tickals for carriage of the revenue to Amarapura. There was also a tax of a tickal of silver and 25 baskets of unhusked rice on each plough paid to the Central Government and of 15 baskets paid to the *myothugyi.*

After the British occupation Mingaladon, formerly a township (q.v.) was added as another circle.

In-de A township of Dala province, absorbed in Rangoon district at the British occupation. It included Seiktha and Kyaiklat circles In 1864 there were 3,404 acres under rice. In 1875 it was one of the townships allotted to Thôngwa on the formation of that district, and it is now part of Pyapôn district. It may also have included Kyunton circle.

Ingabu. A township or province of Hanthawaddy in Burman times, also known as Pa-aing, founded about 700 B.E. (1400 A.D.) by Mohura or Razadarit. There is no mention of this township in the copies still extant of the Records of 1783 and 1803, but it existed as a township on the British occupation. It included Tantabin, Kyun-u, Padan, Kasin, Yandoon and Ta-ke circles. In 1875 the last two circles passed to Thôngwa on the formation of that district, and the other four are now in Insein district and retain their original boundaries, as circles of Insein township. In 1864 there were 21,514 acres under cultivation.

Mingala-don. One of the townships or provinces of Hanthawaddy in Burman times. Founded in the reign of Ponnareika about

670 B.E. (1310 A.D.) Apparently known as Ramanagi. At or before the British occupation it became included in Hmawbi (q. v.) as the Mingaladon Revenue Circle. Details of population but not of revenue are given in the record of 1803 A.D.

Paunglin.

A township or province of Hanthawaddy founded by. Teiktha Raza about 700 A.D. Details of the population, sources and rates of revenue are given in the record of 1803. On the British occupation it continued to have a separate existence as a township, and included the circles of Paunggyi, Kyungale and Yetho It passed to Pegu in 1883, but Yetho circle was transferred to Hanthawaddy in the same year and now forms part of Insein township. In 1864 there were 30,889 acres under rice, but the Kondan circle, hitherto included in Paunglin, was in that year re-transferred to Hmawbi (now Insein) township and next year the area under rice had decreased to 23,861 acres

Pyapôn.

Formerly a township of Dala province, included in Rangoon district at the British occupation There are four circles, Myoma, Pyindaye, Wakema and Tawtanee In 1864 there were 11,293 acres under cultivation with rice In 1875 it was transferred to Thôngwa district and has since then been constituted as a separate district. It may also have included Kyaiklat and Kyunton circles but these probably were part of In-de township

Pegu.

Formerly a township of Rangoon district including the revenue circles of Pegu, Myoma and Mayinzaya It was at one time the headquarters of a subdivision, but these were subsequently moved to Syriam. This subdivision corresponds with the portion of Hanthawaddy included in Rangoon district, the other subdivision consisting of the old province of Dala Subsequently it again became the headquarters of a subdivision. In 1861 there were 20,141 acres under rice. In 1883 it was separated from Rangoon on the formation of Pegu district.

Thôngwa

A township of the Burman province of Dala, it did not form part of Hanthawaddy until it was absorbed therein as part of Rangoon district at the British occupation It included three circles, Thongwa Myoma Khattia and Inzayat. About 1865 the Twante Myoma, Panhlaing and Indapura circles together with the three circles of Thôngwa were joined to form Twante or Yandoon township. In 1864 there were 30,016 acres under rice in the township. In 1875 on the formation of Thongwa district the former circles of Thôngwa township were included therein.

Zainganaing.

A township or province of Hanthawaddy in Burman

times, also known as Hintha Zainganaing. Founded in 885 B E. (1633 A.D.) by Takarut Bi, the last Talaing King. It was subsequently abandoned and was devoid of inhabitants at the revenue inquest of 1145 B.E (1783 A D.). In 1159 B.E. (1797 A.D.) when it was a waste of "high jungle and long grass" the Governor of Hanthawaddy ordered that it should be re established. Details of the revenue and population are given in the record of 1803. It retained a separate existence as a township for some time after the British occupation, but was finally absorbed into Pegu township as a revenue circle. When Zainganaing was a township of Rangoon district it included the circles of Lagunbyin, Myoma and Tadagyi In 1864 there were 11,677 acres under rice.

Zwebon. A township or province of Hanthawaddy in Burman times, founded by Wimala in 531 B.E. (1168 A.D.) and formerly known as Zwegabon. It lay between Pegu and Syriam, and continued to have a separate existence until the formation of the Pegu district in 1883 A.D. when it was divided between this district and the Syriam subdivision of Hanthawaddy Details of population but not of revenue are given in the record of 1803. It appears to have been one of the most populous tracts of the district in Burman times. When originally constituted a township of Rangoon district Zwebon included two circles—Nyaungbin and Pegu There were 20,456 acres under rice in 1864. The Nyaungbin circle passed to Pegu and the Pegu circle has passed to Kayan township and has been repeatedly subdivided. (See Pegu, Kayan).

Insein. The headquarters of Insein district, a large industrial and residential town with a Municipality, situated in Mingaladon circle, Insein township, and containing besides the usual public buildings, a jail, a reformatory, an engineering school and large railway works. In 1881 it had a population of less than 1,000, in 1891 it had risen to 3 755, in 1901 to 3,595 and now numbers 13,925. This rapid increase is partly due to the establishment of the subdivisional headquarters there in 1880, partly to extensions of the area of the town, and very largely to the erection of the railway works and to the popularity of Insein as a suburb of Rangoon with which it is connected by an excellent train service. In 1912 it became the headquarters of the new Insein district.

The town lies on the slopes of the ridges and there is only a narrow strip of rice land between it and the Hlaing river to which it is connected by a metalled road at the end

of which is a landing stage which can be used at all states of the tide. To its position and to the rocky nature of its soil it owes its excellent water which is famed throughout the district. It is connected by cross roads to the Rangoon-Prome road but it has also a direct road to Rangoon which proceeds northwards to the Mingaladon Golf Links where it meets the footpath to Hlawga, and then curves eastwards to join the Rangoon-Prome road at the village of Sangyiwa. There are many gardens, residential and others, at Insein, but it lies just outside the Rangoon pine-apple area and to the north of the town the country is wonderfully broken, full of deep hollows and steep ridges, and little cultivated, though most of it is owned and assessed to land revenue. There are one or two churches and several schools and two American Baptist Mission Seminaries for the training of pastors to the Burmans and to the Karens with 40 and 140 students respectively, and the same Mission maintains a school for training Bible Women in which there are usually about 5 students

Insein Sub-division.

A subdivision of Insein district with two townships, Hlègu and Insein. Until the constitution of Insein district in 1912 it consisted of the townships of Insein, Taitabin and Taikkyi of which Tantabin was formed out of the other two in 1909.[1]

Insein Township.

A township of Insein subdivision bounded on the north by Taikkyi township, on the west by Tantabin township, on the south by Rangoon Town district and on the east by the Rangoon River and the Hlègu township. It includes the revenue circles of Kasin, Hmawbi, Kyaunggon, Mingaladon, Kondan, Yetho, Bala, Sitpin and Kyaukchaung. All of these practically speaking retain their original boundaries, except that on the formation of Tantabin township in 1909 the northern part of the old Kasin circle was cut off under the name of Wataya and given to Tantabin township. Yetho and Bala have been formed out of the former circle of Yetho and four *kwin* of Sitpin have been allotted to Pegu Circles bordering on Rangoon have been encroached upon by extensions of the town. Kasin circle used to belong to Ingabu township, Mingaladon was formerly a separate township; Kondan and Yetho (including Bala) were taken from Paunglin, and Kyaukchaung and Sitpin from Dawbon The other two circles formed part of the township of Hmawbi, which was the nucleus of Insein. The township

[1] General Department Notification No 36, dated the 28th January 1909.

runs down both sides of the Ridge and is highly cultivated but the circles on the east are exhausted and infertile; those on the west are better. It is traversed by the Rangoon-Prome railway line and has two fine waterways the Hlaing and Pazundaung Rivers and several excellent metalled roads. In its centre lies the Hlawga Lake and in the extreme south the Kokine Lake both of which supply Rangoon with water. A little south of the Hlawga Lake lies the Mingaladon Golf Links which are among the finest in the east. It is a populous township and has the largest proportion of aliens (Part III, Volume B) who are found mostly in the neighbourhood of Rangoon and Insein, on the Ridge and near the railway line. The principal occupations are rice cultivation and rice trading, but there is a certain number of fishermen, there are numerous market gardeners on the Ridge to the north of Rangoon, who are mostly descended from Shan immigrants or are Chinamen, and there is a large number of traders and shop-keepers in the towns. The railway workshops at Insein afford employment to many hands, mostly Indians including many Punjabis. The old town of Hmawbi, and the pagodas known as the Kyaikkasan, Kyaukwaing, Kyaikkalo, Kyaikkalat and Thadugan, all situated on the Ridge, are objects of antiquarian interest.

The following table shows the increase in its population but it must be remembered that its area was lessened on the extension of Rangoon in 1895 and by the creation of Tantabin township in 1908. Formerly it was called Hmawbi.

Year.	Township.	Population
1881 .	Hmawbi . .	63,572
1891 ...	Hmawbi ..	86,247
1901 ..	Insein ..	1,07,981
1911 ...	Insein	88,092

The chief towns are Hlawga, Hmawbi, Insein, Kamayut, Kanbe, Kayinchaung, Letkokpin, Sangyiwa, Taukkyan Thamaing, Thayetkon, Theingyaung, Togyaunggyi, and Wanetchaung, details concerning which are given below and also in Volume B, Part I.

Hlawga. A town[1] of 542 inhabitants in Kyaunggon circle, Insein

[1] Revenue Department Notification No. 100. dated the 29th December 1908.

township, on the Rangoon-Prome railway, containing a post office, bazaar and rest-house. It is situated in the middle of fertile rice fields near the Hlaing River to the bank of which it is connected by a short road. Another road passing round the northern edge of the Hlawga Lake connects it with the Rangoon-Prome Road and a footpath forms a link between it and the Insein-Mingaladon-Sangyiwa road. Two or three miles to the south-east is the Thadugan Pagoda on the western bank of the Hlawga Lake.

Hmawbi. A town[1] in Hmawbi circle, Insein township, formerly the township and subdivisional headquarters and before that the city of a Burman Province. Population 1880, 803; 1901, 2,062, 1911, 2,581. There are still traceable the remains of the old fort at the southern extremity of the Hmawbi Ridge which was the scene of a skirmish between the Burmans and the British under Sir Archibald Campbell in 1852. It forms a parallelegram with an entrance on each of the east and west sides, and a deep ditch round it. The village lies on the Rangoon-Prome railway and contains a police-station, post office, telegraph office, bazaar and rest-house. It lies in the middle of fertile rice fields between the Hlaing River and the Ridge. To the former it is connected by a road which passes through the large villages of Minywa and Bonlonzeik on the township border to reach the river-bank at Shwehle which is in Tantabin circle and is connected by a ferry with the town of Tantabin almost exactly opposite. The Rangoon-Prome Road leaves the Ridge at Hmawbi and bending westwards through the town proceeds in a northerly direction along the Hmawbi Ridge (a line of high land parallel to the main Ridge) towards Taikkyi. Half a mile north of Hmawbi is situated the Experimental Farm of the Agricultural Department and a few miles further on the Hmawbi Forest Reserve. The Hmawbi River, which is navigable for small craft, runs through the town and connects it with the Hlaing River, so that there is a good deal of trade

Kamayut A town[2] of 730 inhabitants in the Mingaladon circle, Insein township It lies at the base of the Ridge on the Rangoon-Insein road and the Rangoon-Prome railway and contains a police-station and rest-house. Brick making

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[1] Revenue Department Notification No 100, dated the 29th December 1908.

[2] Revenue Department Notification No. 8, dated the 2nd February 1909.

and duck breeding are carried on and there are many pine-apple and other gardens beside the village while a narrow strip of rice land separates it from the Hlaing River. There is a large Indian population which breeds cattle and supplies Rangoon with milk.

Kanbe. A town[1] in Kondan circle, Insein township, close to Rangoon containing a police-station and a rest-house. Its population was in 1877, 877; 1901, 1,338; 1911, 1,891. Even in 1880, as now, there was a large proportion of natives of India. The villagers are mostly engaged in cultivating rice-fields and gardens but some have their work in Rangoon. There is a rubber plantation close by. Kanbe lies close to the Rangoon-Prome road to which it is connected by a metalled road. Between the Ridge on which the village is built and the Rangoon-Prome road lies a hollow which used to be used as a rifle-range. There is a handsome pagoda in the village and a Hindu temple with a large tank. About two miles to the south-east lies Bauktaw at the terminus of a short suburban railway leading to Rangoon.

Kayin-chaung. A village of 1,535 inhabitants in Insein township founded about the time of the annexation of Upper Burma. The first settlers were Karens, hence the name "Kayin-chaung." It is now a straggling village extending from the east end of Hlawga Town to Hlawga lake and lying along the Hlawga-Hlegu road and the people are mostly Burmans. There are only four Karen families now and they all profess Buddhism The people are mostly rice-cultivators but there are a few mango and plantain gardens. It is really a suburb of Hlawga, being about two furlongs away from that town.

Letkok-pin. A village of 1,571 inhabitants in Insein township lying along the Rangoon-Insein road, founded about ninety years ago by Shans. The name is derived from a big "let-kok" tree standing somewhere near the present Rangoon-Insein road. The chief industry carried on by the early settlers was that of making hats out of bamboo bark. The population is fairly distributed among Indians, Burmans and the descendants of the original Shans. There are at present four factories: one for dyeing, one for rope making, one for making Chinese sauce, and one for making sessamum oil; but the people for the most part are rice cultivators and coolies.

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[1] Revenue Department Notification No. 57, dated the 25th July 1910.

Sangyiwa. A village of 504 inhabitants in Kondan circle, Insein township, containing a rest-house and situated about twelve miles from Rangoon on the Ridge at the junction of the road from Insein to the Mingaladon Golf Links at Tanyingon and the Rangoon-Prome road. There are rubber plantations to the north but most of the people are engaged in cultivating rice-fields and gardens and many of them are Indians who rear cattle. Further along the Ridge to the north are the Kyaikkalo and Kyaikkalat pagodas.

Taukkyan. A pretty village of 489 inhabitants in Yetho circle, Insein township, about twenty-two miles north of Rangoon on the ridge at the junction of the Rangoon-Prome road with the road coming from Hlawga and the road going to Hlegu and so on to Pegu and Toungoo. It contains a police-station, rest-house and a small bazaar. There are some fine trees in the village and close by are good snipe grounds. The villagers are engaged in the cultivation of rice and gardens and many of them are Indians who rear cattle.

Thamaing-Okkyin. A village of 1,559 inhabitants in Mingaladon circle, Insein township, on the Rangoon-Prome railway and the Rangoon-Insein road, noted for its brick-fields and consequently duck-breeding. Among the rice-fields between the village and the Hlaing River lies the Rifle Range and camps of regulars and of volunteers are often formed in its neighbourhood. The people are engaged in agriculture and there is a large Indian population which breeds cattle and supplies Rangoon with milk. A short road which passes close to the Kyaukwaing pagoda connects the village with the Rangoon-Prome road.

Thayetkon. A long narrow village of 1,647 inhabitants stretching along the eastern base of the Ridge. To the west lies the barren summit of the Ridge, but the village itself is almost hidden in orchards of mango, jack, marian and other valuable trees. To the east lies a strip of land good for growing vegetables, and beyond that begins an immense rice plain stretching far into the Pegu district. Close by at Yegu is the Pumping Station of the Hlawga waterworks, and the pipe-line with a narrow tramway on the top leads southwards past Kanbe to Rangoon and is constantly used for walking by the villagers. There are a few rubber plantations in the vicinity.

Theingyaung. A village of 2,073 inhabitants in Kyaukchaung circle, Insein township, lying on the little Theinchaung creek separating this from Sitpin circle which gives it access at high tide to the Pazundaung river and connected by a metalled road with Thingangyun station on the Rangoon-

Mandalay railway. A continuation of this road was made to Togyaunggyi on the Pazundaung river but is at present useless for want of bridges. The circle headman of Kyauchaung circle lives in Theingyaung. The villagers cultivate rice and do a little boating and fishing. There is a football ground, but it is seldom used, and in the rains is ankle-deep in water.

Togyaunggyi. A long village of 1,518 inhabitants in Sitpin circle, Insein township, lying on the eastern bank of the Pazundaung river and connected by a ferry with the other bank close to which lies the village of Thayetkôn. The villagers cultivate rice and do a little fishing, boating and trading.

Wanetchaung. A town[1] of 2,383 inhabitants in Hmawbi circle, Insein township, on the border of that and the Taikkyi township, containing a post office and a rest-house. It lies on the Rangoon-Prome railway and is connected by a metalled road with the Rangoon-Prome road. On the west are rice-fields, but on the east the broken country of the Ridge is covered by jungle and gardens mostly worked by Shans who also grow rice in the narrow fertile hollows. Tigers are often heard of in the neighbourhood

Hlegu Township A township of Insein district corresponding fairly closely to the old province of Hanthawaddy, Paunglin (q v.).—It has an area of 603 square miles and its population in the last four census reports is shown as follows —

Year.	Township.	Population.
1881	... Paunglin	49,526
1891	... Do.	44,758
1901	... Hlegu	49,642
1911	. Do.	58,705

but there have been one or two changes in boundaries of the township, one[2] of which was contemporaneous with the institution of the Insein district. The present western boundary of the township, which is shaped like a long thin oval running north and south, is the Taikkyi and Insein townships; its eastern boundary follows the Pegu river northwards to a point near and north-east of Dabein town, then follows the Lagunbyin river to its source and then the watershed between the Pazundaung and Pegu rivers till it reaches the Pegu mountain range. The population is mainly Burman, but Karens are numerous. Except in the north, which is mostly hill and forest, the township is level

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[1] Revenue Department Notification No. 100, dated the 29th December 1908.

[2] General Department Notification No. 113, dated the 23rd March 1912.

and cultivated with rice. Much of the land, however, especially near the railway line, is old and infertile. Besides agriculture the people find occupation in fishing and boating in the rivers and in working timber in the forests. It is well supplied with communications, having the Pazundaung and Pegu rivers, both of which are navigable for launches, the Rangoon-Mandalay railway and a fairly good system of roads It has a large Indian population—almost the same number in proportion to its population as the township of Taikkyi. The principal towns are Hlègu, Paunggyi, Nanti, Yemun, Dabein, Ledaunggan, Tewainggyi, Kyungale and Sabudaung, of which a detailed description is given below and in Volume B, Part I.

Dabein.

Dabein is mentioned in the *sittans* of Bodawpaya's reign as one of the villages of Ma-u The town or fort of Ma u, where presumably the *myothugyi* lived, lies on the bank of the Pegu river east of Dabein Nothing certain is known as to the foundation or origin of Dabein The name is said to mean " Duck-breeding village and possibly the Talaing form meant literally " Village duck tread." The original inhabitants of this and other old villages on the Pegu river and its tributaries were probably all Talaing, whereas in the Pazundaung valley the population consisted from an early date largely of Karens and Shans

Dabein town is situated on the Dabein creek, a tributary of the Pegu river and has 3,866 inhabitants The creek is navigable by barges and small launches. The Rangoon-Mandalay railway has a station at Dabein and the metalled road from Hlègu to Tawa passes through the town from east to west. There is one rice-mill Most of the rice from the neighbourhood is sent to Rangoon by river. There is a police-station and there was formerly a sub-divisional court at Dabein. The prosperity of the town is said to have declined considerably since the removal of the court consequent on the reorganisation of the Pegu and Hanthawaddy districts in 1912. Many of the gold and silver smiths who were very numerous have migrated to Hlègu, Pegu and, strangely enough, to Kyauktan, a railway station south of Tawa.

The land-owning families have for some generations studiously intermarried and now form a sort of caste. Their land however is old and exhausted: they do not attempt to farm it or finance their tenants on a reasonable system; and their prospects are far from bright. The principal pagoda is known in Dabein as the Nwanzedi and to neighbouring villages as Ma At Paya, from the name of

its founder or restorer Ma At, a land-owner still living in Dabein. It is related that Ma At erected the pagoda over the grave of her husband and subsequently added two layers of brick work to the original pagoda. It has a festival at the full moon of *Pyatho* (January). Dabein has numerous colonies. The cultivating labourers and tenants, who formerly lived in the town, have gradually moved out and founded villages in the neighbouring fields.

Hlègu. A town of 3,237 inhabitants on the Pazundaung River and the headquarters of the township of the same name. There is a police station, a post office, a telegraph office, a hospital, a Public Works Department bungalow and a Government bazaar. The Rangoon-Pegu road is carried over the river at Hlègu by a large iron bridge There is a metalled road to Dabein, 11 miles distant, and an unmetalled road with metalled footpath to Paunggyi, 17 miles distant. The town of Hlègu is not mentioned by name in the Hanthawaddy "*sittans*" but is probably about a hundred years old.

Kyungale. Kyungale is a suburb of Hlègu.

Ledaunggan. Ledaunggan is a village dating from about the time of the annexation of Pegu. It is not mentioned in the "*sittans*" of 1145 or 1164 B E. Before the second war some cultivation was done in the neighbourhood by the inhabitants of the Bala villages on the eastern edge of the ridge along which the road runs from Rangoon to Taukkyan. Possibly also there was cultivation from Ma-u, Tathi or other villages on the Pegu river. During the war cultivation seems to have been abandoned altogether, the villagers fleeing to remote places on the edge of the forests on the Pegu hills. After the war a great impetus was given to cultivation by the export trade, and it was probably then that regular villages came to be established at Ledaunggan and other places. It should be further noted, however, that the whole of this part of the country seems to have been extremely populous under the Peguan Kings. This is a fair inference from the number of large tanks which are found in the fields. There are traces of salt boiling, and this was doubtless the main occupation of the original Talaing inhabitants. but there was probably a little rice cultivation as well.

Ledaunggan has a station on the Rangoon-Mandalay line. It has 1,248 inhabitants and contains a police outpost. An unmetalled road connects it with Sadalin on the road from Dabein to Hlègu and there is a metalled road to Thayetpingyaung on the Pegu river. Most of the rice is sent to Rangoon by the Pazundaung river, a branch of

which is navigable for barges almost as far as Ledaunggan village. As at Dabein there is a land-owning class but here they farm their own land. There is no important subsidiary industry.

Nanti. A village of 1,185 inhabitants near the Pazundaung river on the Hlegu-Paunggyi road with a police outpost and a Public Works Department bungalow.

Paunggyi. Paunggyi is an old village of 1,933 inhabitants on the Pazundaung river near its source. It has a police-station and a Public Works Department bungalow It is connected with Hlègu by an unmetalled road The village is not mentioned in the "*sittans.*" It is important from its position just outside the forest reserves of the township.

Sabudaung. A village of 1,549 inhabitants near Paungyi in Hlègu township situated at about a furlong on the east of the Government road leading from Hlègu to Paungyi and about 8 miles distance from Hlègu. It is situated on a hillock and surrounded by four fisheries, *viz.*, Pein Ingyi, Pein Ingale, Yebyukan and Saukchôn. The villagers including the headman are all Karen Christians, and in the centre of the village there is a Christian Church. On the east of the village about 100 feet away there is a Burmese village called Ingyinkwin and the Kaytin Choung and Yebyugôn fisheries. The village is called by the Karens "Sabudoung" which means "sparrows' nests" and these were found in abundance on the trees and bushes in a fishery called Sabudoung which was at about 2 furlongs away from this village in the north-west. The Sabudoung fishery is dried up and has now become rice land Sabudoung village is called after this fishery This village was established in 122[illegible] B E. by the late Myoôk Maung Pan Byu of Hlègu, a Karen Christian, and his children and relations live in the village to this day, the present headman Maung Po Thein being Maung Pan Byu's own grandson

Tewainggyi. Tewainggyi is a small village of 363 inhabitants with a railway station south of Ledaunggan.

Yemun. Yemûn is a village of 1,378 inhabitants on the Rangoon-Pegu road north-east of Hlegu. It has a police outpost. The village lies on a low spur of the Pegu hills and consists of a collection of gardens. As at Taukkyan in the Insein township, there is here an old camping ground formerly used by troops marching from Rangoon to Pegu and Toungoo

Taikkyi Subdivision. A subdivision of the Insein district containing the townships of Taikkyi and Tantabin and formed in 1912 on the constitution of Insein district.

Taikkyi Township. A township of the Insein subdivision including the revenue circles of Okkan, Tabu, Myoungtanga, and part of Aingkalaung. Of these the first two circles originally constituted the Okkan circle. The other two have remained unaltered since the British occupation, when together with Okkan and Thônzè they formed the Hlaing township. It lies, generally speaking, between the Pegu mountain range and the Hlaing river and is subject to floods along that river. In the east is wooded country stretching to the Pegu range. It is traversed throughout its length by the Rangoon-Prome railway, the Hlaing river and the Rangoon-Prome road, of which the last occupies generally speaking the middle position and sends out feeder roads to the other two. Taikkyi is the most thinly populated of the three townships of Insein district but there is a large Indian and Chinese population mostly collected along the railway. There are also many Shans in the east and Yabeins in the north-east corner and Karens are found all over the township In 1903 there was at least one Chin village. Most of the people are engaged in agriculture, but there are various branches of the timber-industry on the west and fishing and boating on the east of the township while the railway in the centre attracts a large number of traders and coolies. There used to be a silk industry in the north-east, but this has died out. About half of the forest reserves of the district lie in this township and contain valuable timber. The township is watered by various streams flowing from the hills on the west to the Hlaing river on the east of which the Okkan and the Gyobyu streams are among the most important The township contains many places of historic interest. During the wars between Burma and Pegu, if the attack was to be made by land the Burman army left the Irrawaddy in the neighbourhood of Hlaing on the Hlaing river and in this township and marched across country. Traces of old fortifications exist at Hlaing and Tabu.

The following table shows its population at the last 4 censuses.

Year	Township.	Population.
1881	Hlaing	30,570
1891	Do	48,084
1901	Taikkyi	73,263
1911	Do.	58,221

The increase between 1881 and 1901 is probably due to the extension of cultivation and the growth of the towns along the railway. The subsequent decrease is due to the

change of boundary consequent on the constitution of Tantabin township in 1909

The principal villages are Hlaing, Kinpadi, Myaungtanga, Okkan, Palôn, Paukkôn, Pugyi, Taikkyi, Taikkyi-Shansu, Thanatchaung and Thayagôn, details concerning most of which are given below and in Volume B, Part I.

Hlaing. A village of 582 inhabitants in the Myaungtanga circle, Taikkyi township, said to have been founded in the time of Razadarit in the 14th century.[1] It was specifically excluded from the operation of the waste, land grants in 1861, but the land within the old fort had all been cultivated in 1877. At that time there remained the walls of the town and three pagodas The walls are of brick and earth, 15 feet high and 30 feet broad at the base, and were arranged in a square, each side facing one of the cardinal points of the compass In length they were about 1,000 yards with a gateway in the centre of each The bricks were broad, long, flat and very well baked. It is now important chiefly as the terminus of the Irrawaddy Flotilla Company's Service of steamers. Every Monday, Wednesday and Friday a steamer arrives from Rangoon at Hlaing (strictly speaking at Pogaung village exactly opposite, in the Tantabin township) and returns next day—provided it does not run aground for a tide on the shoals beside Thayetchaung village. To the north of the village there is extensive cultivation of tobacco, maize, chillies, beans and other "kaing" crops Unfortunately it is not connected by road with the Rangoon-Prome road, the intervening land being very low and liable to floods so that its construction would be costly, and perhaps difficult There is a rest-house on the river bank.

Kinpadi. A remote village of 920 inhabitants in Palôn circle, Taikkyi township, important chiefly because it is the terminus of a road leading from the Rangoon-Prome road at Palôn through Palôn railway station to the reserved forests on the east There is a forest rest-house Most of the people are engaged in cultivating the rice plain at the southern extremity of which the village lies, but many find employment in the forests

Myaungtanga. An agricultural village of 1,617 inhabitants in Myaungtanga circle, Taikkyi township, containing two rest-houses. There are many toddy palms among rice-fields in the neighbourhood. The village lies on the Rangoon-Prome road and close to the Hlaing river but is not joined to the latter by a road, though such a road would serve Kywegu

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[1] See page 30

village and Bawle circle very well. The people live almost entirely by agriculture.

Okkan. A village of 1,251 inhabitants with a bazaar in Okkan circle, Taikkyi township, on the Rangoon-Prome road near the railway line. It is said to have been founded about 1580 by Talaings related to the Peguan dynasty and subsequently colonised by Arakanese The population declined on the opening of the railway station at Paukkôn some 3 miles to the east along the Rangoon Prome road. The people are almost wholly engaged in agriculture.

Palôn. A town * of 1,084 inhabitants with a post office and rest-house on the Rangoon-Prome railway and connected with the Rangoon-Prome road by a road which is continued east to Kinpadi. The village has increased greatly since the opening of the railway. Its population is mostly agricultural, but many find occupation in the forests and many of them are Indians who breed cattle.

Paukkôn. A town * of 2,323 inhabitants in Okkan circle, Taikkyi township, situated at where the Rangoon-Prome road recrosses the Rangoon-Prome railway from west to east, containing a police-station, post office, bazaar and a rest-house. Most of the inhabitants are engaged in agriculture, including "kaing" crops such as maize, chillies, etc., along the Okkan stream, but many find employment in the forests and there are a considerable number of traders and coolies.

Pugyi. A village of 1,388 inhabitants in Myaungtanga circle, Taikkyi township, on the Rangoon-Prome railway It lies near the forests where many of the people find work, and contains a saw-mill. On the west lie the rice-fields worked by the villagers.

Taikkyi A town * of 2,768 inhabitants in Myaungtanga circle, Taikkyi township. It is the headquarters of the township and contains a police-station, post office, telegraph office, bazaar and rest-house. It is situated on the Rangoon-Prome railway and the Rangoon-Prome road and is connected with the Hlaing river at Thayetchaung by a short road. The town has become important and populous only since the railway was built. Most of the people are engaged in agriculture but there is a large trading and cooly class.

Taikkyi-Shansu. A village of 1,865 inhabitants on the east side of the railway opposite Taikkyi, containing a large number of

* Revenue Department Notification No. 100, dated the 29th December 1908.

Shans. The people are engaged in agriculture, the Shans in particular working gardens.

Thanatchaung. A town * of 1,691 inhabitants in Myaung-tanga circle, Taikkyi township, on the Rangoon-Prome railway, with a small bazaar. The people are mostly engaged in agriculture and in the neighbouring forests, but there are many Indians who breed cattle and sell milk

Thayagon. A village of 472 inhabitants in Taikkyi township about five miles distant from Okkan railway station. During the rains, one cannot go to it by road or by boat but must make one's way across the rice-fields. The village is situated on a rising ground close to the Magayi forest reserve and its inhabitants are mostly Burmans and Yabeins. It was founded about 18 years ago by Maung San U and U Moung Gyi

The villagers are mostly coolies and wood cutters. There is a forest bungalow there built about 1 years ago. Elephants, tigers, leopards, bears, deer and other game abound in the Magayi forest which is close by. The climate is a little malarious.

Tantabin Township. A township of the Taikkyi subdivision, Insein district, which was formed in 1909 † out of parts of the Insein and Taikkyi townships and includes the revenue circles of Padan, Kyun- U, Wataya, Tantabin, Leingôn, Bawlè and the larger part of Aingkalaung. It is everywhere subject to floods except in the circles of Padan and Wataya and in the southern part of Leingôn circle. It is bounded on the north by Henzada district and Taikkyi township; on the west by the Ma-ubin district, from which it is separated for most of its length by the Bawlè river; on the south by the Panhlaing river which separates it from Syriam district; and on the east by the Insein and Taikkyi townships. It is almost entirely flat and is cut by the Hlaing, Bawlè and Panhlaing rivers, and the creeks connecting the first two, into islands which are of low level in the centre and of high level along their edges The Irrawaddy Flotilla Company maintains a service of steamers on both the Hlaing and Bawlè rivers and other launches ply on the Panhlaing The people of the township are chiefly engaged in agriculture, mostly rice-cultivation, but nearly all the fisheries of the district are contained in it and they give employment to many. Its population at the last census, 1911, was 60,227.

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* Revenue Department Notification No. 100, dated the 29th December 1906.

† General Department Notification No. 36, dated the 28th January 1909.

It contains a considerable Hindu population but very few Mahomedans and many of the former are cultivators. The township is sparsely populated and much of it was occupied late. There are no objects of historical or antiquarian interest.

Kywegu. A village of 1,517 inhabitants on the western bank of the Hlaing river in Bawlè circle, Tantabin township, not far from the village of Myaungtanga. The people are occupied in agriculture, fishing and boating.

Tantabin. A town* in Tantabin circle of Tantabin township of which it became the headquarters in 1909. It contained 1,012 inhabitants in 1877, and 1,959 in 1911. Formerly it was the headquarters of a Burman township and a stockade was erected here in the war of 1826 armed with 36 pieces of various calibre, but it was stormed and carried under Colonel Godwin.

The town now consists of a double or treble row of houses lying along the western bank of the Hlaing river just below the junction of that river and the Kokkowa creek Two launches of the Irrawaddy Flotilla Company touch at it every day except Sunday, one on its way up the river and one on its way down. There is a police station, post office, telegraph office and rest-house. The people mostly cultivate rice, and fish and work in boats on the river. The circle headman of Tantabin circle lives in the village.

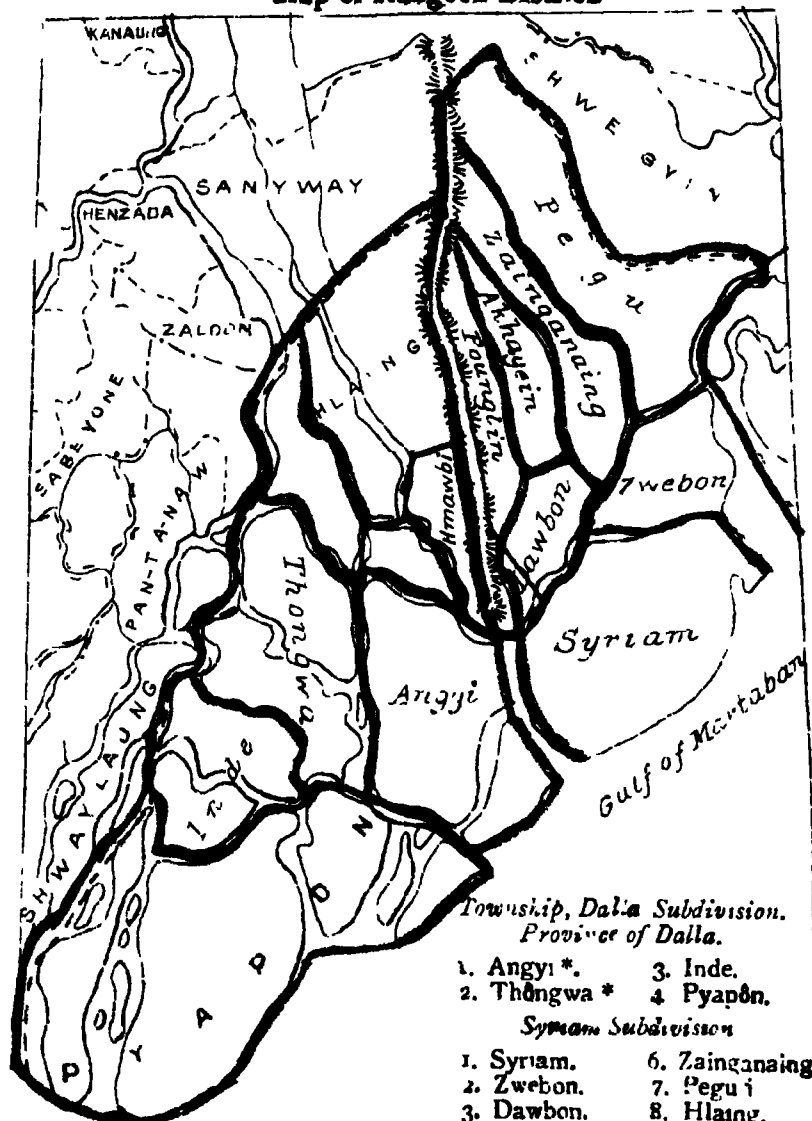
Tawlate. A village of 868 inhabitants with a police-station, post office and rest-house on the Hlaing river where it is joined by the Bawlè creek which connects it with the Bawlè river. As at Tantabin two launches of the Irrawaddy Flotilla Company call every week-day. It is the terminus of their service on the Bawlè river. Like most riverine villages it consists of a long double line of houses among the orchards on the river bank. Behind it are rich rice lands where most of the inhabitants find occupation.

Tetthit. A village of 834 inhabitants on the Panhlaing river with a police-station and rest-house. The people are engaged in cultivation, mostly that of rice and "*dhani*" (nipa-palm), fishing and boating

* Revenue Department Notification No. 103, dated the 20th December 1910.

APPENDICES.

APPENDIX I.

Map of Rangoon District.

Approximate Limits of District, 1868

Hanthawaddy District as it existed just before the partition of 1912.

* Twante in Angyi and Yandoon in Thôngwa with their adjacent circles had formerly been united as the Yandoon, Dalla or Twante township.

† Bawni had been another township; north of Pegu.

APPENDIX II.

THE THIRTY-TWO PPOVINCES OF HANTHAWADDY.

Hanthawaddy* founded in 514 D. E. (592 A.D.) under Thamala.

Kyaukhmaw	517	,,	595	
Ban	518	,,	596	
Dônzayit	519	,,	597	
Kyigu	520	,,	598	
Sittang*	529	,,	607	Wimala.
Dinmè	530	,,	608	
Zwègabôn*	531	,,	609	
Attha	532	,,	610	
Hmawbyo	536	,,	614	Mahaindatha.
Lagunbyin*	549	,,	627	
Kayein*	550	,,	628	Mahaintha.
Ma-u*	552	,,	630	
Ramanagi	676	,,	754	Ponnarika.
Ramawaddy	679	,,	757	
Hmawbi*	670	,,	748	
Hlaing*	673	,,	751	
Paunglin*	...	,,	.	Teiktha Raza
Tandawgyi*	...	,,	...	Binya U.
Tidut	..	,,	...	Mahura.
Zeta				
Zaingtu*.				
Fa-aing (Ingabu)*.				
Tonkan.				
Yenwe (Bawni)*.				
Meranyinsaya				
Tinbaung.				
Minyehla.				
Kawliah* ...	...		...	Razadirit.
Paingda.				

To these were subsequently added—.

Winbyaing	814 B. E.	(1452 A.D.)	Shin Saw Bu
Yunzalin*	840 B. E.	(1478 A.D.)	Dhammazedi.
Zaingganaing*	885 B. E.	(1523 A.D.)	Takarut Bi.

NOTE.—The names of the provinces and other details in the above list are taken from the index to the Hanthawaddy Sittan (Revenue Inquest). The era abbreviated as D. E. is the Dodosara Era introduced into Burma by Samundari of Prome in the year of religion, 624 A.B. It corresponds to the Saka era of India. The dates as given are rather inaccurate as the date given for the foundation of Hanthawaddy is also known as 1116 A.B. which corresponds with 494 D.E. and 573 A.D. (Buddhism, Volume I, page 260).

NOTE 2.—The towns marked thus* still survived as headquarters of townships or circles at the annexation. Those in Hanthawaddy are mentioned in Chapter XIV. Further details concerning those outside Hanthawaddy are given in the Gazetteer of 1880 or Hanthawaddy Sittan. Ruins of these towns still exist in some cases.

APPENDIX III.

TOWNSHIPS OF RANGOON DISTRICT AS ORIGINALLY CONSTITUTED AND SUBSEQUENT DISTRIBUTION.

Township	Extent	Allotted to	Year
Bawni‡	whole	allotted to Toungoo ..	1864
Pyapôn† / Thôngwa† / Inde†	...	Thôngwa ...	1875
Yandoon†	part	Thôngwa, Twante subdivision.	1875
Ingabu‡	part	Thôngwa, Insein subdivision	1875
Hlaing‡ / Hmawbi‡	..	Insein subdivision	1875
Dawbon‡	part	Insein subdivision, Pegu district.	1883
Pegu‡ / Akharein‡ / Zainganaing‡ / Paunglin‡	whole	Pegu district .	1883
Zwebon‡	part	Pegu district, Kyauktan subdivision.	1883
Syriam	...	Kyauktan subdivision.	
Angyi†	...	Twante subdivision.	

NOTE—Townships marked thus † formed part of the province of Dala prior to the annexation: those marked thus ‡ part of Hanthawaddy · Syriam was a semi-independent unit.

APPENDIX IV.

List of Books and Papers Consulted.

(Foot-notes refer to the editions shown below.)

A.—Non-official Publications.

Alexander ... The Burman Empire (Parbury and Allen, London, (1827). Of little interest; notes of a soldier.

Baker ... Rangoon (Hatchard, London, 1852). Of little interest; notes of a chaplain.

Bigandet ... History of R. C. Mission (Rangoon, 1865). Contains information not found elsewhere, especially concerning the period 1720—50A.D.

Cox ... Journal (London, 1821).
Valuable observations, with much detail not found elsewhere, concerning Burma at end of 18th century.

de Beylie .. L'architecture hindoue en extrème Orient. (Leroux, Paris, 1908) Camparative analysis of Burman architecture with historical note by Professor Duroiselle.

Ferguson ... Indian Architecture. Contains many suggestions concerning Burman archæology, which have not yet been worked out.

Forbes ... The Languages of Further India (W. H. Allen, London, 1881).
A collection of papers by the best oriental scholar of the Burma Commission.

Frazer (Dr. J G.) The Golden Bough, and sequels. Throws light on Burman customs.

Fytche ... Burma Past and Present.

Hakluyt ... The Voyages (Dent, London, 1908) Volumes 3 and 4, in this cheap edition, Everyman's Library, contains accounts of voyages made to Burma by Fytche and others

Haswell ... Peguan Grammar and Vocabulary (Rangoon)

Laurie ... The Second Burmese War, Rangoon. (Smith, Elder, London, 1853). The Second Burmese War, Pegu (Smith, Elder, London, 1854). Our Burmese Wars (W. H. Allan, London, 1880). These three books contain much interesting information with contemporaneous pamphlets and official publications.

Parker ... Burma, Relations with China (Rangoon, 1893). An interesting, but rather prejudiced study of a neglected subject.

Phayre ... History of Burma (Trench, London, 1884).

Vambery ... The Adventures of Ferdinand Mendes Pinto (Fisher, Unwin, London, 1897). A cheap edition of a book containing much information about Burma, Pegu and Tennasserim, and the Portuguese in the 16th century.

Riley ... Ralph Fytche (Fisher, Unwin, London, 1899). Contains little that is not given in the Everyman edition of Hakluyt, the exception consisting of notes.

San Germano .. The Burmese Empire (John Murray, London, 1833).

Schmidt ... Buch der Ragavan (Holden, Vienna, 1906). The only Talaing chronicle translated into an European language, and also the only chronicle now known to exist in Talaing.

Snodgrass ... The Burmese War (John Murray, London, 1824). A valuable account of the operations and of Burma at the time, rather philo-Burman.

Symes Embassy to Ava (London, Debrett 1800).

B —OFFICIAL PUBLICATIONS—

Annual Administration Reports from 1869-70

Annual Revenue Reports from 1865-66 The earlier ones are in manuscript.

British Burma Gazetteer, 1879, by Col. Spearman

Census Reports, 1872, 1881. 1891, 1901, 1911.

Day. Report on the Fisheries of British Burma 1869. (published 1877)

Duroiselle. Notes on Ancient Geography, 1906.

Forchhammer Notes on the Shwe Dagôn Pagoda, 1883. Notes on early Geography, 1884 Jardine Prize Essay. 188[illegible]

Geology of Pegu. Theobald, 1892

Lloyd. Gazetteer of Rangoon District 1868

Memorandum on the sparseness of Population, Sir A Phayre, 1865

Objects of Antiquarian Interest 1892. A list of some pagodas; inadequate and incomplete.

Pegu Manual. Captain Horace Browne, 18[illegible]1

Pegu Manual a revised edition 1865.

Pegu Manual. Fryer's Handbook 1868.

Report on the Local Salt Industry, 1908.

Report on the Settlement Operations (Two volumes 1866-67, 1867-68)

Report on the Settlement Operations (Five volumes 1879—84)

Report on the Settlement Operations, (Three volumes 1897—1900).

Report on the Settlement Operations in Syriam District, 1907—10.

Report on the Settlement Operations in Insein District, 1910—12.

Report on the Settlement Department in British Burma, 1871-1872.

Taw Sein Ko The Kalyani inscriptions 1893. Notes on a tour in Ramannadesa, 1893.

Sir Richard Temple Antiquities of Ramannadesa, 1893

Wilson Settlement Manual, Volume I, a compilation of papers and extracts all indexed

C —MANUSCRIPT PAPERS OFFICIAL

District Letter Book, 1856, 1862 1866, 1867, 1868.

District Revenue Report, with remarks of Chief Commissioner, 1861 to 1866.

Abkari Report. Chief Commissioner's remarks, 1864-65.

Secretariat Files 159 and 235—1861, 142 and 152—1862. These contain the only information still extant concerning the first settlement. (Captain Browne's).

Order Book, 1882.

District Revenue Reports, 1902-03 and 1904-05 to 1908-09.

The reports between 1865 and 1902, as well as that for 1903-04 have apparently been destroyed.

D.—Books and Manuscripts in Burmese.

(1) *Printed Historical Works.*

Alaung Paya Ayadawbon, Hanthawaddy Press, Rangoon, 1900. A detailed account of war between Burma and Pegu.

Mun Yazawun, U Shwe Naw, Hanthawaddy Press, 1899.

A collection of Mun legends by the retired Extra Assistant Commissioner whom Phayre had engaged to translate the Mun chronicles obtained from Bangkôk.

Razadirit, Seya Hwaik (White ?). British Burma News Press, 1877. A chronicle of the reign of Razadirit, with a summary of previous history.

Shwe Dagôn Thamaing, Yatana Thiri Press, 1900 Early legends relating to the Orissa colonists

Shwemawdaw Thamaing, Seya Ku, Hanthawaddy Press, 1897. A brief history of Pegu compiled from many sources

(2) *Manuscript Historical Works.*

The chronicles of Sinbyumyashin (Sinbyumya Shin Ayedawbôn) A parabaik in Bernard Free Library, containing the chronicles of the reign of Buyin Naung

The Revenue Inquests of 1784 and 1803, (Hanthawaddy Sittan, cited as Sittan) The 'Doomsday Book' of Hanthawaddy, three parabaik in the Bernard Library, presented by the Kinwun Mingyi

The History of Syriam (Than Hlyin Yazawum) A palm leaf manuscript in the Bernard Library; a copy is in the Syriam Monastery. A summary of Peguan History with special reference to Syriam. Certain passages show that it is partly based on or extracted from older manuscripts

The Shwe San Daw (Twante) Thamaing A palm leaf manuscript in the Bernard Library; of little value.

(3) *Historical Plays.*

Kywema Nangayaing, 1907, acted by Aung Bala. Contains the Attha Legend.

Minander hnin Shin Mwe Lun, Seya Mya, Dhammapitha Press, 1909. Contains the Minander Legend of the Orissa Series.

Than Hlyin Mintayagyi, Taunglaung Pyazat, Parts I to IV.*

Khabin Min Maung Di Pyazat, Seya Mya.*

Buyin Min Gaun hnin Razadirit, Mingala Thiri Press, Rangoon, 1903.*

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* Signifies works not consulted, but included on list because of their interest

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